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VISIT…

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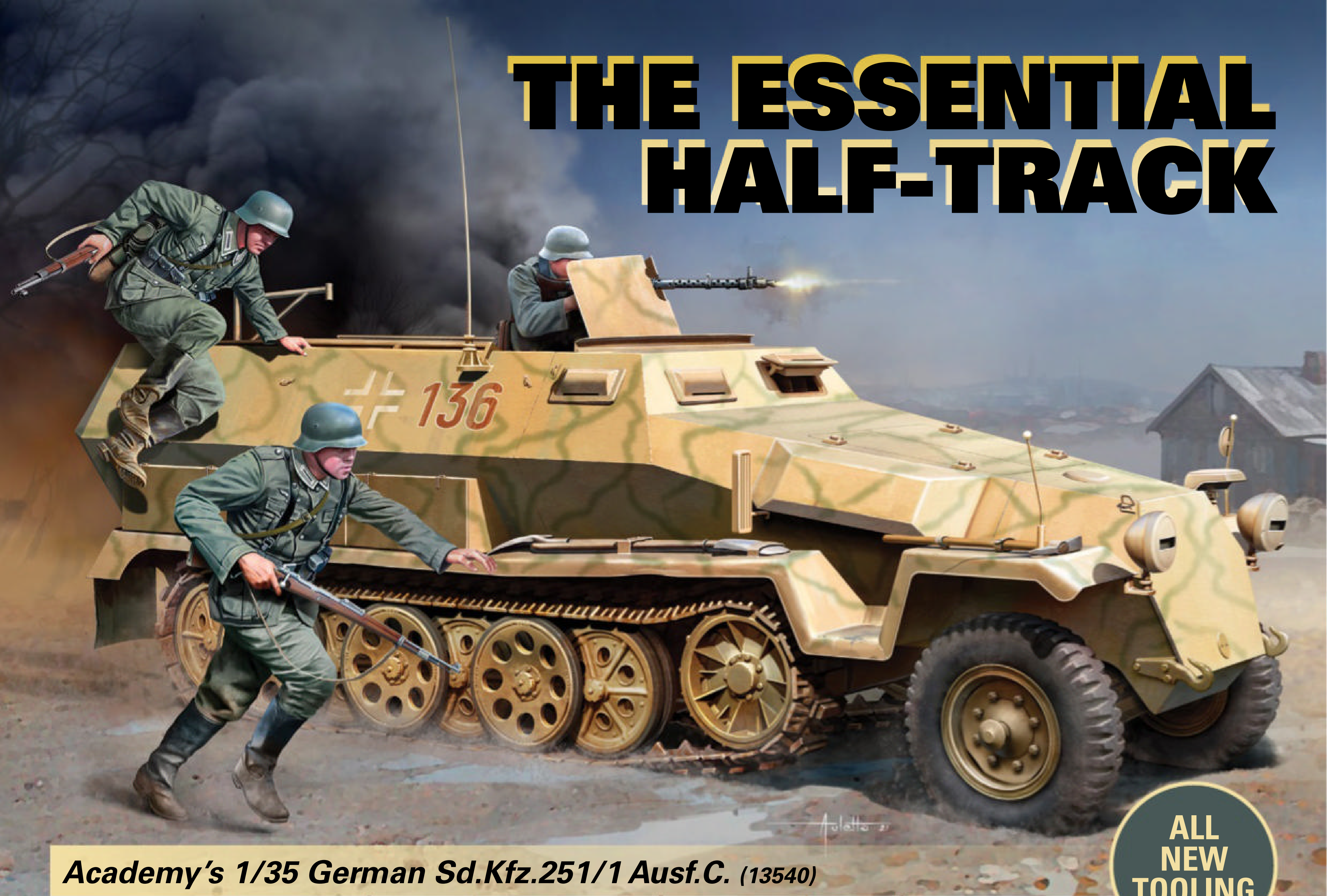

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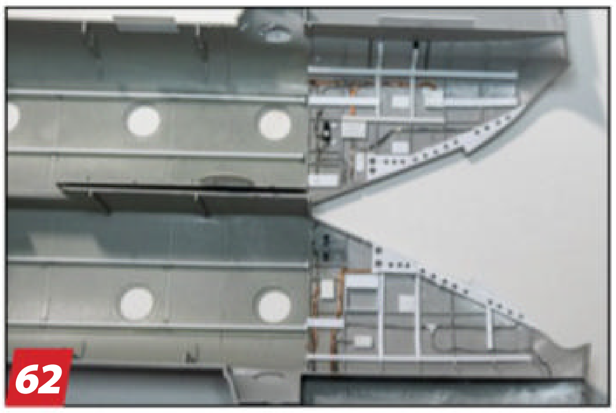
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By Aaron Skinner

The face of the future

Given that many of the models built are of historical subjects, it may seem odd that this issue of *FSM* focuses on what lies ahead. Predicting the future is fraught because some of it is assumption and guesswork based on the past.

To be clear, I am optimistic and think the hobby's future is rosy. We have new kits, accessories, finishing supplies, books, and tools constantly being produced. The quality and variety of the work being displayed at shows and online is truly inspiring.

But just as scale modeling today doesn't exactly resemble what it looked like 40 years ago — before photo-etched metal and resin were commonplace — it is unlikely the future will look like it does now. How different it will be is a matter of perspective and attitude. To gauge those impressions, I put a general question out on Facebook and many of the comments in the article on Page 14 were in response to my post. The fact that the question generated nearly 100 comments testifies to the fact that many modelers have thought about the future.

Without spoiling the story for you, I want to expand on one concern many modelers have expressed not only in the Facebook comments but in emails and personal conversations over the years: How to get young people into the hobby? The idea that youthful modelers don't exist is demonstrably untrue. The builder of the stunning Gundam diorama in this issue is 19-year-old Nico Suratos. She won gold in her age division in the Philippines section of the Gunpla Builders World Cup in October and will compete against gold medalists from around the world this December for the championship.

Rather than throwing in the towel or falling back on the hackneyed idea that "kids today are more interested in their phones," be part of the solution. Take the time to introduce one of those kids to the hobby. Make it fun and engaging, let them pick the kit, and don't force them into doing things the way you do them.

Nico Suratos, 19, is a creative and enthusiastic modeler as you can see in how she designed her Gundam diorama on pg. 34.

As my fellow *FSM* editor Tim Kidwell, a father of two, has pointed out, most of the time, kids are happy to spend time with you. If you include them in your hobby, show them the ropes, and let them build what they want to build sitting at the bench with you, they will discover modeling is fun and be proud of what they have done. They may not stick with it forever — honestly, how many modelers have let cars, jobs, college, military service, and relationships stop their building, often for years — but they will likely come back. Let's all get out there and start creating scale modeling's next generation.

Aaron Skinner

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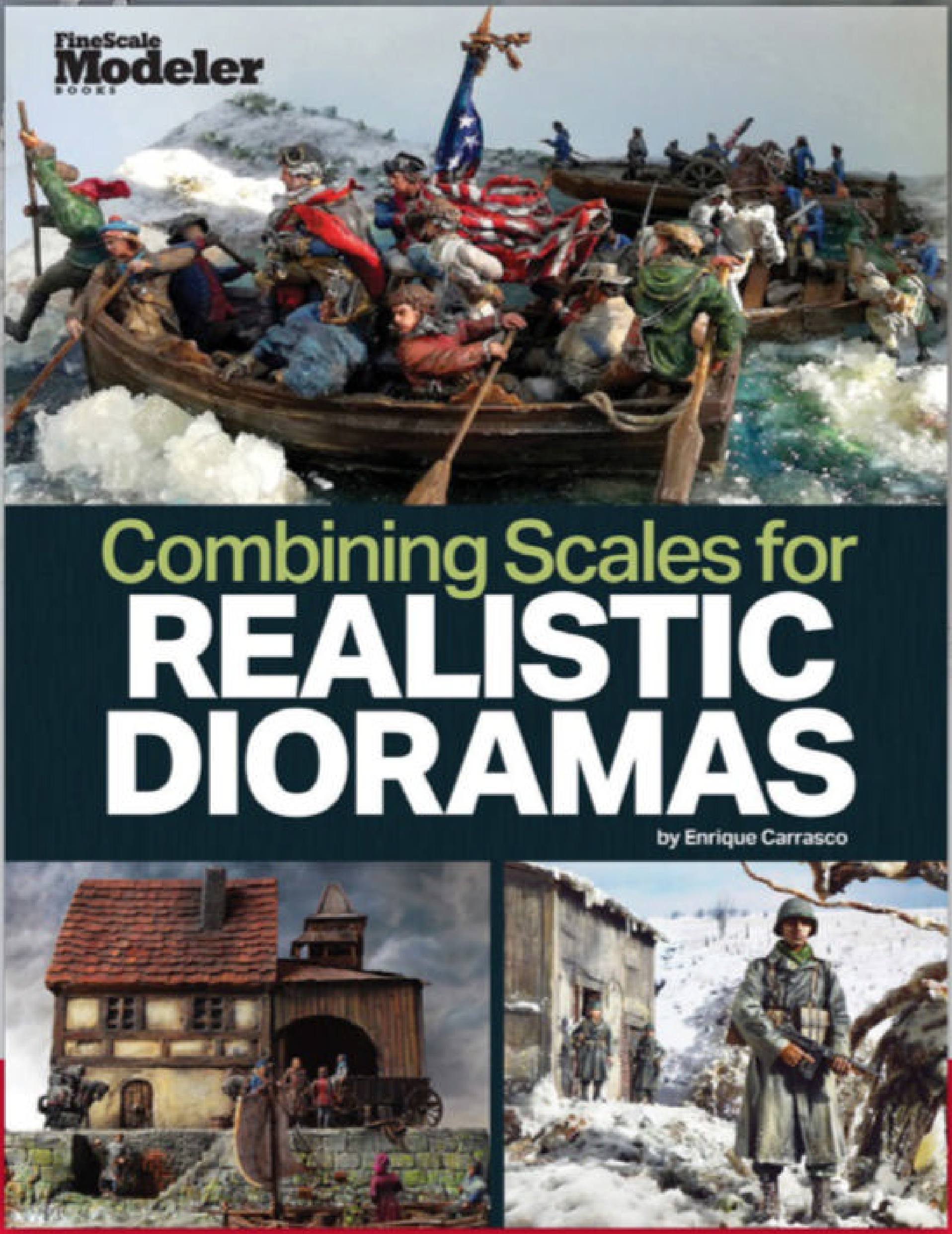

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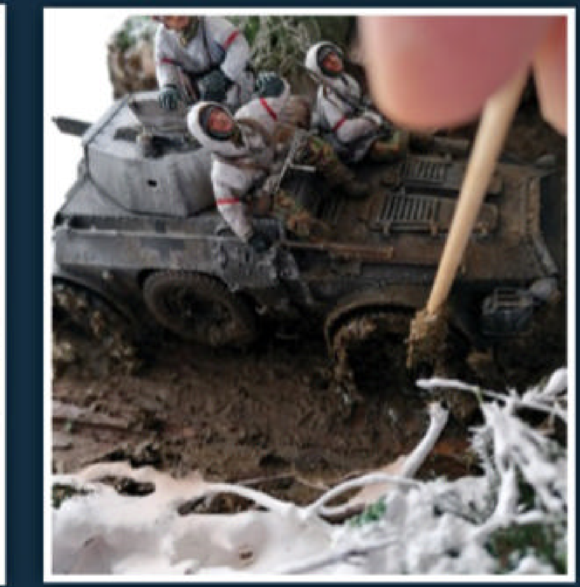

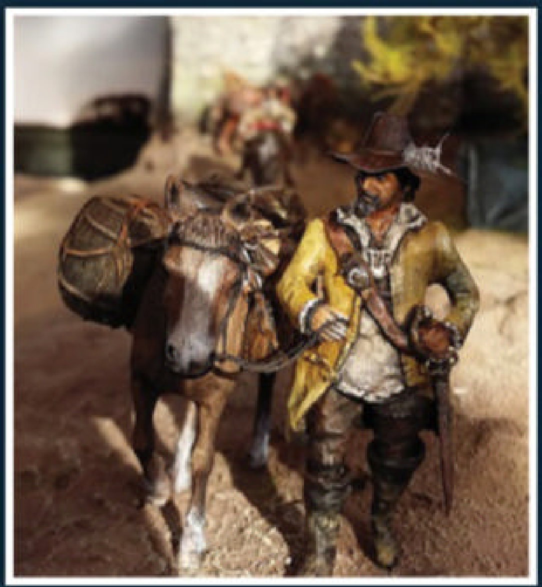

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P40485

Kenneth Erickson imagines if the F-4 hadn't been successful forcing the USAF to continuously update the F-101 instead.

Show off those what-if builds

I have a suggestion for a small section in the magazine in which readers can submit photographs of their "what-if" builds. I've seen quite a few online, and some are very thought provoking.

I thought there should be some "rules" for submissions, so, to that end: **1.** Any prototypes (for example, the Airfix TSR.2) must be modeled as if it is in service and not just straight from the box. **2.** Ideally, readers should also submit some theoretical context. For example, an East German Sukhoi Su-34 as alternative history in which the Berlin Wall never came down. You can also modernize historical vehicles. I am currently working on bringing Tamiya's M3 Lee into the 21st century with a 120mm main gun from an Abrams and a 25mm chain gun from a Bradley.

It's just an idea. Of course, it doesn't have to run every issue, but every now and again, as there are submissions.

– Chris Croot
United Kingdom

Ed.: We agree, Chris. What-if builds can be interesting and creative. I'm not sure about a special section in the magazine for them, but they are always welcome in Reader Gallery. If you want to send us images of your modernized M3, go to fileupload.Kalmbach.com/contribute and follow the directions. Be sure to send us your name as you want it to appear in publication and the city and state/province where you live. In the notes section, tell us about the model, the kit(s) used, painting, weathering, why you built it, and what it represents. These instructions go for anyone wanting to share photos for Reader Gallery. – Aaron Skinner

Looking to write for *FSM*

Hello! I am an avid scale modeler and have an Instagram following of 22,000 under the handle @master_of_sprues. I was curious as to how I go about getting published in *FineScale Modeler* and who to contact for that? I would love to expand my work and progress to a larger audience!

– Evan Watkins
Peoria, Ariz.

Ed.: Hey, Evan. Thanks for your interest in writing for FSM. *We are always interested in hearing from potential new authors. The process for submitting is pretty simple: Collect the images — in-progress and finished — and the text and send them to the magazine. The easiest way put together a manuscript is to write detailed captions about what you are doing in each photo. We prefer stories that focus on techniques and show how something was done versus what was done. Stories can be submitted via FTP through fileupload.Kalmbach.com/contribute. If you have any questions, contact me at askinner@FineScale.com or Tim Kidwell at tkidwell@Kalmbach.com. – A.S.*

Rewarding recovery reading

If you put all the issues of *FSM* together you would have a modeling how-to book with, well, let's see, a lot of pages.

I have been a scale modeler for some 60 years and a subscriber to *FSM* for about 30 of those. I build mostly aircraft but also enjoy an occasional ship and armor kit if they attract my precise interest. No matter what the model, I contribute most of my skills and level of expertise to what I have learned from the issues of *FSM*. Being an extremely detail-oriented builder and a perfectionist on top of that, I am my own worst critic, but *FSM* keeps me honest and on track to complete accurate and precise models.

I recently had both knees replaced, which consisted of about seven weeks of recovery. To help pass the time and complete a longtime desire to go back and reread every *FSM* I had saved, kept in order by month and year, and stored in sealed metal holders. I started saving issues in 2001 and they are filed in three-year, back-to-back groups.

It's been a rewarding and very enjoyable recovery time for me, not to mention rediscovering articles of interest, numerous tips, advice, and new products. Comments in Scale Talk stirred new ideas and thoughts from the past, [as did] seeing how kits have evolved over the years and how things have changed.

Thank you for a great and useful publication and for the many years of modeling information you have shared with so many of us.

– Mike Arnold,
Fort Collins, Colo.

Ed.: I hope you are recovered and back at the bench with all the fresh inspiration. I'm glad that the magazine remains helpful even years later. I did the same thing before I started working here, and still do on occasion. – A.S.

More about the hobby, please

I enjoy your publication, but feel you need to liven it up a bit. The hobby itself isn't stagnant; because of the COVID-19 pandemic, it has gained many new conscripts and attracted back quite a few who had left. When the pandemic was at its height, everyone had free time on their hands because we were all in quarantine. Everyone returned to hobbies done indoors, be it decoupage, crochet, photography, model trains, or model building. So, many modelers returned to their stash of unbuilt kits. Suddenly, they remembered what a great hobby it is and are coming back to see what is new and improved. *FineScale Modeler* has got to be more aggressive and journalistic. Your magazine is still the pulse of the hobby, especially here in the states.

Here are some suggestions for articles I and other readers might like to see: With the departure of Model Master and the contraction of Testors, what other paint brands are available? I mean, we still have Tamiya, Humbrol, Ammo of Mig Jimenez, and Revell, among others. Focus on which

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paints are enamels, acrylics, and lacquers, and how to apply them properly.

How about an article about parts prep once you open the box? How many modelers soak the parts trees in warm soapy water before building? I think you'd be surprised how many don't and fail to realize how important this step can be for proper glue and paint adhesion. I recall, back in the 1960s, how much difficulty I had with Aurora's 1/9 scale monster kits because they were literally soaked in mold-release agent. Nobody was there to teach me or bring that to my attention. Your magazine could be that tutor. Older modelers, like me, have the responsibility to pass this info onto new hobbyists. Ours is a hobby to be shared. By each one of us improving our skills, it more or less forces others to improve theirs.

And a word of advice to older modelers: Don't knock the Gundam enthusiasts. Remember, they are young modelers who have, with the help of Bandai, carved out their own niche in the hobby and they are most likely the future of the hobby. In time, in search of new subject matter, they may venture into aircraft, armor, ships, or cars.

There are other industry topics the magazine could look at, such as the history and thought behind Tamiya's Military Miniatures series that's evolved from the company's motorized kits; interviews with the folks behind Round 2, Atlantis, and Revell; what have Airfix and Heller been up to; and what happened to Dragon? What about the retail sector with closure of so many brick-and-mortar hobby stores?

There are probably a lot of other stories, but the bottom line is this: People, especially the general public, need to know the hobby of scale modeling is still around even in these fast-paced times.

– William Mezzano
Hampshire, Ill.

Ed.: Thanks for your expansive letter, William. You raise some good ideas that we may well look at for possible inclusion in upcoming issues or on the website. I would say that while cleaning parts at the start of a build is probably less critical now than it once was, because mold release seems less common than it was, it is always a good idea to clean surfaces before painting, especially if using acrylics, to remove oil from fingers left during the build. I wholeheartedly agree Gundam builders are modelers who should be taken seriously, and I think we are seeing a growing acceptance of that part of the hobby with the inclusion of Gundam and mecha categories at many shows. – A.S.

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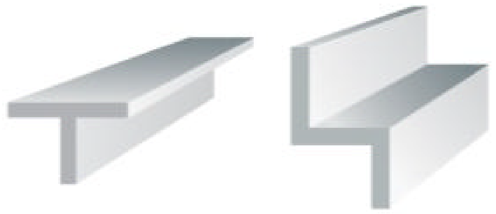

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0612
1/48
Z-326 Trenér Master

Z-326 Trenér Master Limited Dual Combo from Eduard, No. 11167, $79.95.

MODEL KIT № 48226
Gotha Go 242A
WWII German Landing Glider
ICM
1:48 SCALE
MADE IN UKRAINE

Gotha Go 242A, WWII German landing glider from ICM, No. 48226, $TBA.

1/72 SCALE

72 special hobby
Gloster Meteor T Mk.7
'British Jet Trainer'
SH 72468

Gloster Meteor T Mk.7 from Special Hobby, No. 72468, $25.60.

MODEL KIT № 72203
Ki-21-Ib 'Sally'
Japanese Heavy Bomber
NEW
ICM
1:72 SCALE
MADE IN UKRAINE

Ki-21-Ib "Sally" Japanese heavy bomber from ICM, No. 72203, $68.99. **WBR**

72 special hobby
Aero 11 L-BUCD
'Blue bird on a long flight over Europe, Africa and Asia'
SH72471

Aero Ab-11 L-BUCD "Blue bird on a long flight over Europe, Africa, and Asia" from Special Hobby, No. 72471, $25.90.

NEW
IBG
Mig-29 in Ukrainian Air Force
1:72
72901

MiG-29 in Ukranian air force from IBG Models, No. 72901, $TBA.

plusmodel
1/72
Martin T4M wheel version

Martin T4M wheel version from Plus Model, No. AL7038, $39.45.

ARMOR

1/16 SCALE

Panzerjäger I B mit 7.5cm StuK 40 L/48
1/16
TAKOM

Panzerjäger I B mit 7.5cm StuK 40 L/48 from Takom, No. 1018, $124.95.

kleiner Panzerbefehlswagen 1 3 IN 1
Sd.Kfz.265
1/16
TAKOM

Kleiner Panzerbefehlswagen 3 in 1 from Takom, No. 1017, $112.95.

1/35 SCALE

FJ43 SUV with hard top
AK
AK35001

FJ43 SUV with hard top from AK Interactive, No. AK35001, $37.35.

Artileriegeneratoewagen M.16 with munitionswagen from Plus Model, No. 587, $445.64.

StuG III Ausf.G March 1943 Alkett Prod.
WITH WINTER TRACKS
1:35
MiniArt
INTERIOR KIT

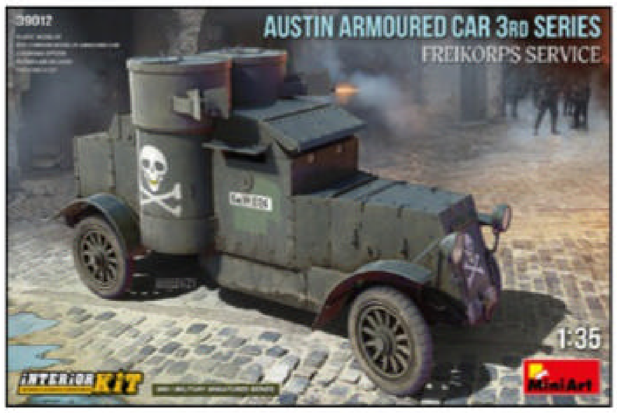
StuG III Ausf G March 1943 Alkett Prod. with winter tracks (interior kit) from MiniArt, No. 35367, $TBA.

MODEL KIT Nº 35135
Unimog S 404
German military truck
ICM
1:35 SCALE
100% NEW MOLDS

Unimog S 404 from ICM, No. 35135, $71.99. **WBR**

FIAT 508 CM
Coloniale
with crew
1:35
ITALERI
Nº 6550

Fiat 508 CM Coloniale with crew from Italeri, No. 6550, $39.99. **WBR**


39012
AUSTIN ARMOURED CAR 3RD SERIES
FREIKORPS SERVICE
1:35
INTERIOR KIT
MiniArt

Austin Armoured Car 3rd Series Freikorps Service from MiniArt, No. 6550, $39.99.

1/72 SCALE

MODEL KIT Nº 72815
APA-50M (ZiL-131)
Airfield mobile electric unit
ICM
1:72 SCALE

APA-50M (ZiL-131) airfield mobile electric unit from ICM, No. 72815, $18.99.

SHIPS

1/35 SCALE

USS ABSD-1 LARGE AUXILIARY FLOATING DRY DOCK
TAKOM

USS ABSD-1 Large Floating Drydock from Takom, No. 6006, $189.95. **WBR**

1/700 SCALE

FLYHAWK
FH 1152S
HMS Formidable 1941
1/700 SCALE
DELUXE EDITION

HMS *Formidable* 1941 from Flyhawk, No. FH1152S, $59.98. **WBR**

AUTO

1/24 SCALE

Mercedes-Benz 190E 2.3 16v
1984 Nürburgring Race of Champions decals
ITALERI
1:24

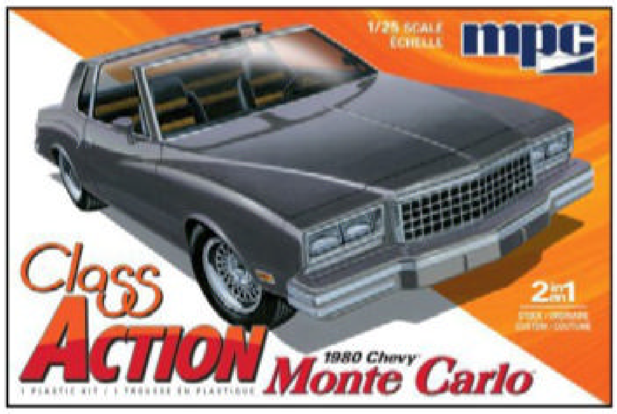
Mercedes-Benz 190E 2.3 16v from Italeri, No. 3624, $61.99. **WBR**

Nissan Z from Tamiya, No. 24363, $49. **WBR**

1/25 SCALE

MONKEEMOBILE
THE WILD CUSTOM, DRIVEN ON TELEVISION BY THE...
LA VOITURE PERSONNALISÉE, CONDUITE À LA TÉLÉVISION PAR LE...
MONKEES
MPC

Monkeemobile from Round2/MPC, No. MPC966M, $31.99.


1/25 SCALE ÉCHELLE
mpc
Class ACTION
1980 Chevy Monte Carlo
2 in 1

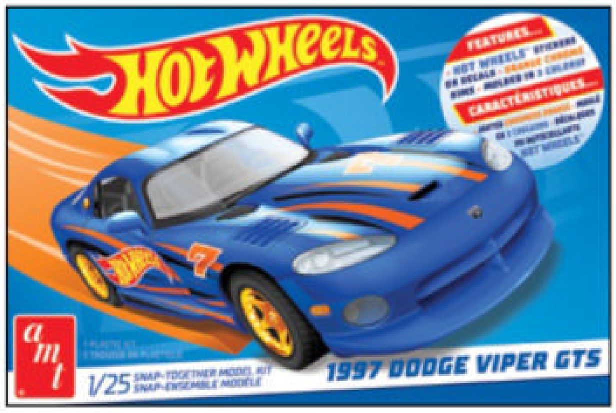
1980 Chevy Monte Carlo "Class Action" from Round2/MPC, No. MPC967M, $33.99. Bonus: chopper and trailer included.

Hot Wheels
FEATURES...
HOT WHEELS DECALS OR STICKERS
PAD-PRINTED TIRES & DRAG SLICKS
THREE WHEEL OPTIONS
amt
1/25 SCALE MODEL KIT
OPEL GT

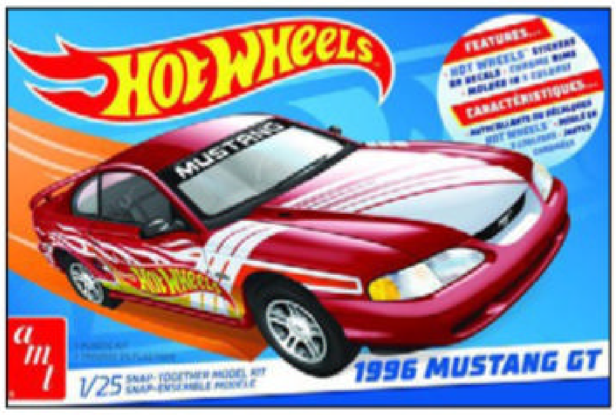
Opel GT from Round2/AMT, No. AMT1303, $31.99. Hot Wheels features decals or stickers, drag slicks, wheel options.

Hot Wheels
FEATURES...
CARACTÉRISTIQUES...
amt
1/25 MODEL KIT
1932 FORD PHANTOM VICKY

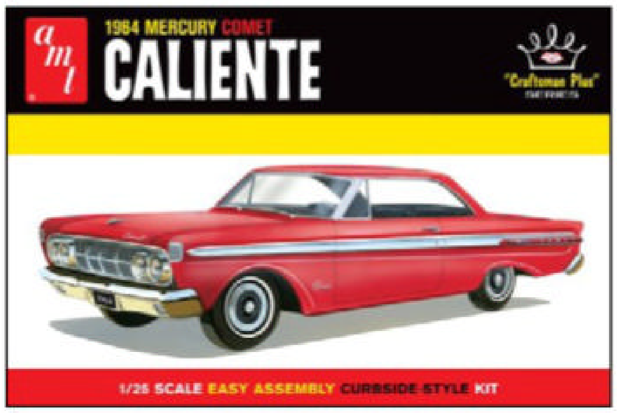
1932 Ford Phantom Vicky from Round2/AMT, No. AMT1313M, $31.99. Hot Wheels features decals or stickers, chrome rims, removable top.


Hot Wheels
FEATURES...
CARACTÉRISTIQUES...
amt
1/25 SNAP-TOGETHER MODEL KIT
1997 DODGE VIPER GTS

1997 Dodge Viper GTS (Snap) from Round2/AMT, No. AMT1349M, $XX. Hot Wheels features decals or stickers, orange chrome rims, molded in 3 colors.


Hot Wheels
FEATURES...
CARACTÉRISTIQUES...
MUSTANG
amt
1/25 SNAP-TOGETHER MODEL KIT
1996 MUSTANG GT

1996 Mustang GT (Snap) from Round2/AMT, No. AMT1349M, $XX. Hot Wheels features decals or stickers, orange chrome rims, molded in 3 colors.


amt
1964 MERCURY COMET
CALIENTE
Craftsman Plus
1/25 SCALE EASY ASSEMBLY CURBSIDE STYLE KIT

1964 Mercury Comet Caliente (curbside) from Round2/AMT, No. AMT1334, $31.99. Craftsman Plus Series.

MODIFIED STOCKER
HAULER AND TRUCK
amt

Hauler and truck (Modified Stocker) 1953 Ford Pickup, trailer and accessories from Round2/AMT, No. AMT1310, $46.99. Modified stocker.

FIGURES

1/32 SCALE

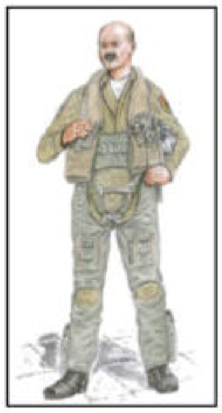
Nieuport XVII pilot from Plus Model/Aero Line, No. AL3011, $16.70.

1/35 SCALE

MODEL KIT Nº 35722
WWI German Infantry in armor
ICM
1:35 SCALE
100% NEW MOLDS

WWI German Infantry in armor from ICM, No. 35722, $28.99.

1/48 SCALE



F-18 pilot from Plus Model/Aero Line, No. AL3011, $8.70.

SPACECRAFT

1/48 SCALE

STAR WARS
THE AUTHENTIC IMPERIAL TIE FIGHTER
amt

***Star Wars* Imperial TIE Fighter** from Round2/AMT, No. AMT1332M, $33.99. **WBR**

1/72 SCALE

STAR WARS
THE MANDALORIAN
RAZOR CREST
AUTHENTIC SCALE MODEL KIT
amt

***Star Wars: The Mandalorian* Razor Crest** from Round2/AMT, No. AMT1273/06, $76.99. **WBR**

1/1400 SCALE

STAR TREK
STAR TREK UNIVERSE
U.S.S. Enterprise NCC-1701-C
amt

***Star Trek* USS *Enterprise* NCC-1701-C** from Round2/AMT, No. AMT1332M, $52.99.

MISCELLANEOUS

1/16 SCALE

The Game O
ICM
1:16 SCALE
100% NEW MOLDS

The Game O from ICM, No. 16212, $32.99.

1/35 SCALE

FARM CART & VILLAGE ACCESSORIES
35657
MiniArt
SCALE 1:35

Farm Cart & Village Accessories from MiniArt, No. 35657, $TBA

PAINTS

AK
3rd GENERATION ACRYLICS
RUST

Rust (3rd Generation Acrylics) from AK Interactive, No. AK11605, $24.

ICM
ITEM 3021
WWII Japanese Aviation
ACRYLIC PAINTS SET

Acrylic Paint Set for WWII Japanese Aviation from ICM, No. 3021, $11.99.

BOOKS

US ATTACK AVIATION

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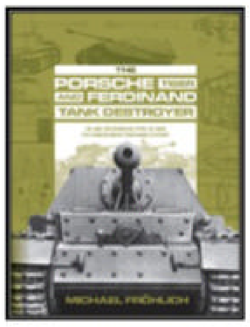
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MICHAEL FRÖHLICH

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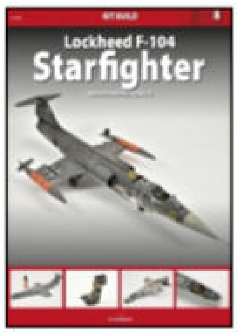
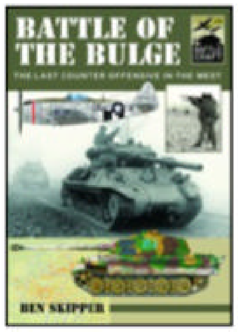
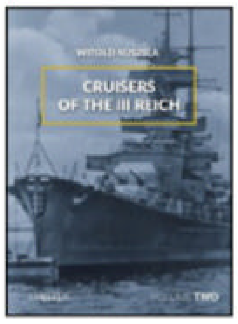

Lockheed F-104
Starfighter

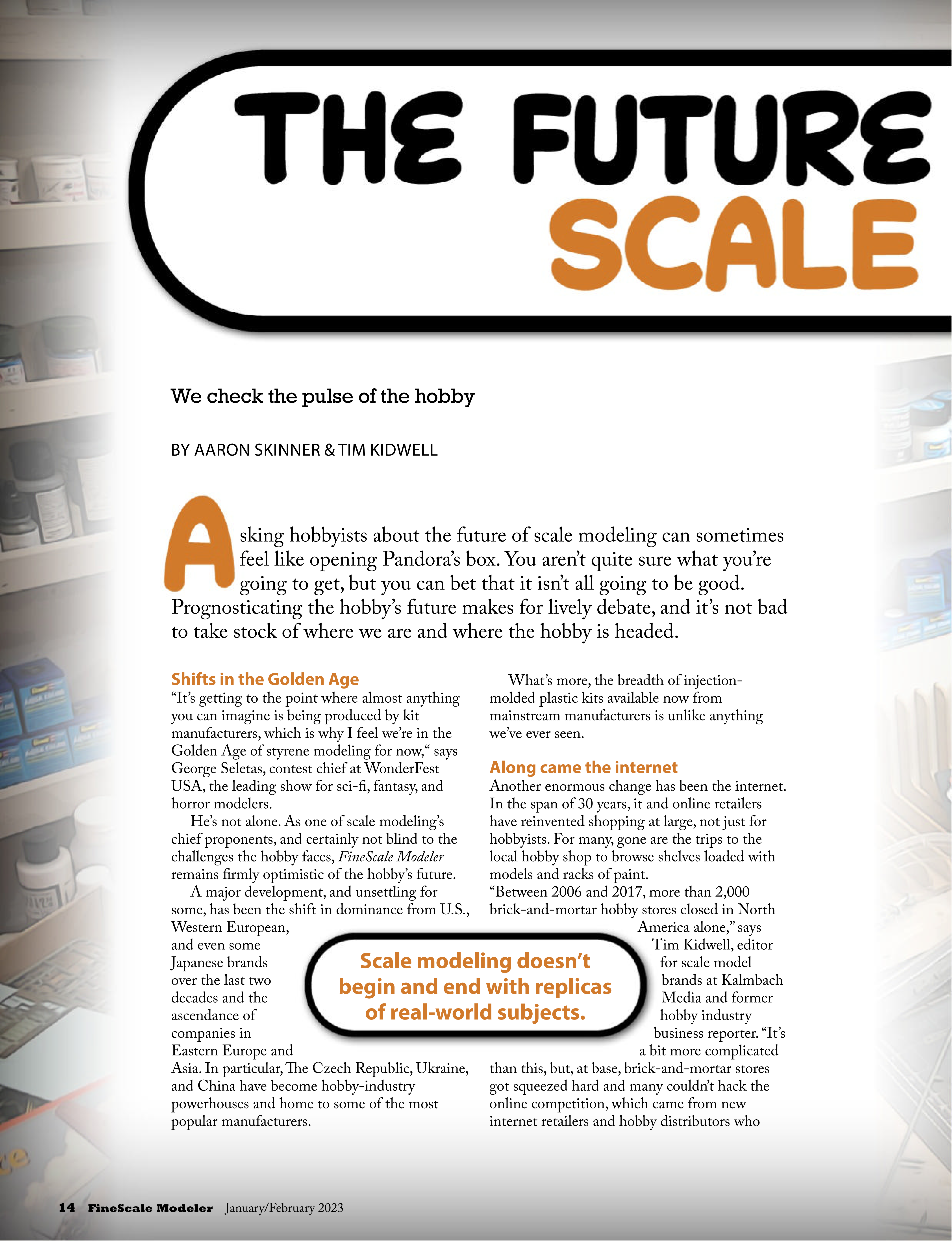
Lockheed F-104 Starfighter from Casemate Publishers/Kagero, softcover, $22.95, 96 pages, 202 color photos, ISBN: 978-8-3672-9411-9.


BATTLE OF THE BULGE
BEN SKIPPER

Battle of the Bulge - A Guide to Modelling the Battle from Casemate Publishers/Pen and Sword, softcover, $28.95, 64 pages, over 200 color and B/W illustrations, ISBN: 978-1-3990-0770-2.


CRUISERS OF THE III REICH

Cruisers of the III Reich — Volume II from CaseMate Publishers/MMP Books, hardcover, $52, 200 pages, B/W photos, scale plans, color profiles, ISBN: 978-8-3659-5885-3.



THE FUTURE
SCALE

We check the pulse of the hobby

BY AARON SKINNER & TIM KIDWELL

Asking hobbyists about the future of scale modeling can sometimes feel like opening Pandora's box. You aren't quite sure what you're going to get, but you can bet that it isn't all going to be good. Prognosticating the hobby's future makes for lively debate, and it's not bad to take stock of where we are and where the hobby is headed.

Shifts in the Golden Age

"It's getting to the point where almost anything you can imagine is being produced by kit manufacturers, which is why I feel we're in the Golden Age of styrene modeling for now," says George Seletas, contest chief at WonderFest USA, the leading show for sci-fi, fantasy, and horror modelers.

He's not alone. As one of scale modeling's chief proponents, and certainly not blind to the challenges the hobby faces, *FineScale Modeler* remains firmly optimistic of the hobby's future.

A major development, and unsettling for some, has been the shift in dominance from U.S., Western European, and even some Japanese brands over the last two decades and the ascendance of companies in Eastern Europe and Asia. In particular, The Czech Republic, Ukraine, and China have become hobby-industry powerhouses and home to some of the most popular manufacturers.

Scale modeling doesn't begin and end with replicas of real-world subjects.

What's more, the breadth of injection-molded plastic kits available now from mainstream manufacturers is unlike anything we've ever seen.

Along came the internet

Another enormous change has been the internet. In the span of 30 years, it and online retailers have reinvented shopping at large, not just for hobbyists. For many, gone are the trips to the local hobby shop to browse shelves loaded with models and racks of paint.

"Between 2006 and 2017, more than 2,000 brick-and-mortar hobby stores closed in North America alone," says Tim Kidwell, editor for scale model brands at Kalmbach Media and former hobby industry business reporter. "It's a bit more complicated than this, but, at base, brick-and-mortar stores got squeezed hard and many couldn't hack the online competition, which came from new internet retailers and hobby distributors who

OF
MODELING

PLASTO
INFINI PAINT

Attendees at the 2022 IPMS/USA National Convention in La Vista, Nebraska, swarm the contest tables to get a look at who won best of category awards. There were about 3,000 entries at the annual event.

grew internet retail arms and cut prices in order to move volume."

The convenience of internet shopping has sacrificed personal attachment to stores, but it has broadened access to kits from around the world. It has also exposed a disparity in the strength of the scale-modeling hobby in the U.S. versus Europe and Asia.

"The hobby will continue to be strong in the European Union and Asia with strong [model] show attendance and younger modelers but will continue to decline more and more in the U.S. as the current crop of older modelers dies out and is not replaced," says Jose Rodriquez, U.S. representative for AK Interactive. "I have seen almost no young modelers at certain shows in the U.S. the last two years. Attendance at some shows, which used to be packed years ago, is getting smaller and smaller."

While that certainly sounds dire, Ernie Ling, an administrator at Large Scale Modeller, doesn't believe the hobby is dying in North America, but maybe undergoing a serious contraction.

"[Scale modeling] will flourish in other parts of the world," he says. "We are such a small market compared to Asia and Europe."

"broadened access to kits from around the world" – Tim Kidwell

Need a part? Print it!

As revolutionary as the internet was to the way hobbyists purchase models, 3D printing may be the next game changer. Far from the rough parts that were produced early on with the technology, resin printers can produce fine fidelity and the cost of the hardware and supplies has dramatically dropped, making it more accessible.

"3D-printing is the future all the way," says Kenny Conklin, co-owner of Hobby Link International. "Since I have been using my 3D printer, I don't even have the urge to touch my styrene kits."

Mike Bishop, former owner of Blue Water Navy, agrees and takes it a step further, suggesting that 3D printing will spell the end of plastic kit manufacturers.

"The modeler will, in the future, download files and print in

SCI-FI
MISCELLANEOUS
MISCELLANEOUS

Some younger modelers drawn to pop-culture subjects like Gundam and mecha attend shows like NordicCon 2022, but many prefer to share their work with their peers online and at specialist Gundam modeling clubs.

After mastering CAD programs, replacing kit parts with 3D-printed items offers car modelers another approach to building unique custom cars. Photo copyright Haiyin – Dreamstime.com.

house," he says. "The days of injection molded kits will come to an end."

According to Kaliste Saloom, president of IPMS/Cajun Modelers, 3D-printed models make both consumer and business sense.

"The printed model may be in single or multiple pieces requiring little or no assembly, or even laid out on a sprue like an injection-molded kit to be clipped and assembled," he says. "No more packaging or production costs. No more mold, material, or supply-chain issues as with traditional manufacturing. Simply create a 3D image suitable for printing and sell the base file to hobbyists who print it out themselves."

Jamie Hood, senior designer and brand manager at Round 2, sees a time when 3D printing will allow complete color replicas to be produced eliminating assembly.

"While today's hobbyist embraces the craft of the making process, for the wider population, locating the tools, supplies and skills needed to build the model … is too big of a hurdle to overcome," he says.

Most modelers haven't embraced 3D printing to quite that extent, but many agree the technology is here to stay. Simply consider the number of websites customers can buy files to print kits and the fact mainstream manufacturers, like Eduard and Resin 2 Detail, have begun printing parts.

Even with more affordable printers and better-quality prints, the technology has yet to spread widely enough to challenge the supremacy of injection-molded plastic kits.

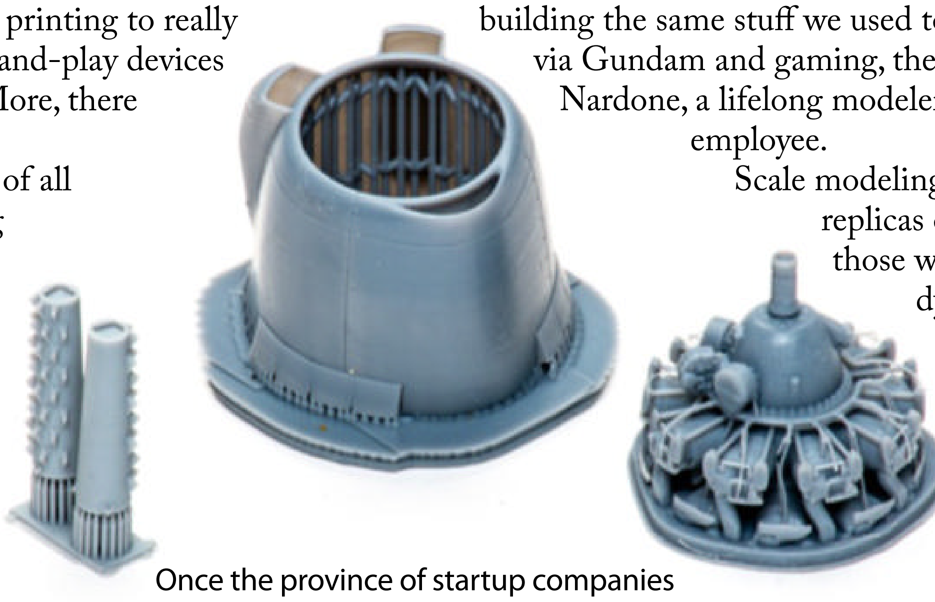
FSM author Chris Mrosko says, "3D printing will never replace plastic due to the slow print times which make it difficult to supply demand."

Hundreds, if not thousands, of creators fill the Wild West that is the current market for 3D printing files. There's everything from generic scenery or stowage items like oil drums and sandbags to full gaming miniatures, vehicles, aircraft, and pop-culture figures. Much of the trade is unregulated, replete with copyright violations and constant sharing and re-sharing of files — think Napster from the early 2000s.

Jim James, a *FineScale Modeler* contributor, says printers need to get faster and bigger, but for home printing to really take off, they need to be simple plug-and-play devices for computer-challenged modelers. More, there needs to be a way to license the files.

"Disney needs to make money off of all those *Mandalorian* N-1 models being printed," he says.

The thing that might stand in the way of 3D printing becoming the revolutionary technology similar to the internet is that not everyone needs a 3D printer, and they're likely more useful to enthusiasts and businesses than a general audience. Like resin, photo-etched metal, and vinyl, 3D printing has its place in scale modeling, but it is unlikely to replace injection-molded plastic in the near term.



Once the province of startup companies and individuals, 3D printing has been embraced by Eduard (left) and Resin2Detail (right) to make aftermarket details.

Death or metamorphosis?

"Scale modeling is dying because kids aren't interested," is a refrain many have fallen back on to explain a seeming lack of youth in the hobby.

There aren't any studies that can be cited to adequately tell us how many tweens and teens are building models, but it doesn't take long when looking at *FineScale Modeler*'s social media feeds to see that there are plenty of people in their 20s out there actively participating in scale modeling. They are denizens of the internet — remember, that all-affecting technology we talked about earlier? They don't attend IPMS or AMPS club meetings or contests. They don't need to. They show their work online, all the time, whenever they want.

"If you have a mind willing to accept that kids today aren't building the same stuff we used to but are still enjoying the hobby via Gundam and gaming, the future is bright," says Ralph Nardone, a lifelong modeler and former hobby store employee.

Scale modeling doesn't begin and end with replicas of real-world subjects. And those who tend to say the hobby is dying miss the forest for the trees. Just because Gundam models are pre-colored, snap-fit kits, or a Games Workshop Ork Battlewagon is total fantasy doesn't and shouldn't matter.

"There are many avenues into scale modeling," Nardone says. The first model he built on his own was a snap-together Monogram "L'il Red Baron" in 1973.

Once considered a niche of the hobby, kits of subjects from and inspired by anime and manga have exploded to become a huge sector. Bandai has been joined by traditional military kit makers like Meng and Trumpeter to produce a dizzying and constantly expanding array of subject matter.

There is also a disconnect between older modelers and the newer generation. Many older hobbyists aren't online, or if they are, they don't inhabit the same cyber-circles as younger modelers.

Daniel Buchmeier, an award-winning diorama builder, points to one of the modelers he's seen on Facebook who goes by Titinun Painter. She has a large following and builds amazing models.

"I think for younger people, there needs to be a more free and creative way to build models," Buchmeier says. "Somebody has to bring the coolness factor to model building and it's not a bunch of 50- to 70-year-olds."

"scale modeling has a place in people's hobby choices post pandemic"
– Fred Medel

Chris Meddings, owner of Inside the Armour, a UK publisher, thinks the days of modeling World War II subjects is numbered because younger modelers have no connection to it.

"Modeling will move away from WWII and probably away from military in favor of more figures, fantasy, sci-fi, and Gunpla," he says.

He notes that Bandai, the biggest model manufacturer in the world in terms of sales and profit, makes nothing WWII related. Its entire catalog is drawn from popular culture.

Snap-together kits of fun subjects, like Revell's 1/20 scale *Scooby Doo Mystery Machine* are perfect entry points for youngsters.

Modeling in the age of COVID

Despite supply chain snarls, COVID-19 proved a boon for many model manufacturers that saw increased sales in 2020 and 2021. Fred Medel, Tamiya America's Marketing Manager, says the pandemic exposed millions of people to the world of scale modeling.

"Specifically, we observed that entirely new customers came into the fold, while others returned to the hobby after a long absence," he explains. "The simple rule of exposure, call to action, and retention alone, promises that scale modeling has a place in people's hobby choices post pandemic."

Hobby distributor Stevens International and MegaHobby, the distributor's online retail arm, experienced a similar surge. Alan and Mike Bass, Stevens president and vice president, said modeling projects boomed during social distancing and minimized activities. They say the industry's goal during and after those peak years is to retain new modelers created during the pandemic, and it appears many people have continued building models post-pandemic, creating a large new pool of scale modelers.

"So long as the industry continues to promote scale modeling and its numerous benefits, we see a high likelihood of retaining a large percentage of these new members of the modeling community, creating an ongoing and higher level of sales," they said in an email.

The kids are all right

"The hobby today is huge, with more manufacturers, more kits, more aftermarket, and more modelers than ever. And it's going to continue to get bigger into the foreseeable future," says Callen Clarke, an award-winning modeler and member of IPMS Metro Oklahoma City.

While modeling hasn't died, the world has definitely changed, and that has forced transitions in the industry and hobby from the manufacturers and retailers to customers and how hobbyists interact with and find one another.

"There are young people coming into the hobby, building LEGO and Gundams," says Steve Iverson, owner of CultTVMan's Hobby Shop.

"The biggest barrier to entry is access to materials and a little bit of bravery to give the hobby a try," says Round 2's Jamie Hood. "So, the responsibility of the current hobbyist is to encourage others to try it out. Ultimately, nothing can compare to the satisfaction that comes from building something ourselves." **FSM**

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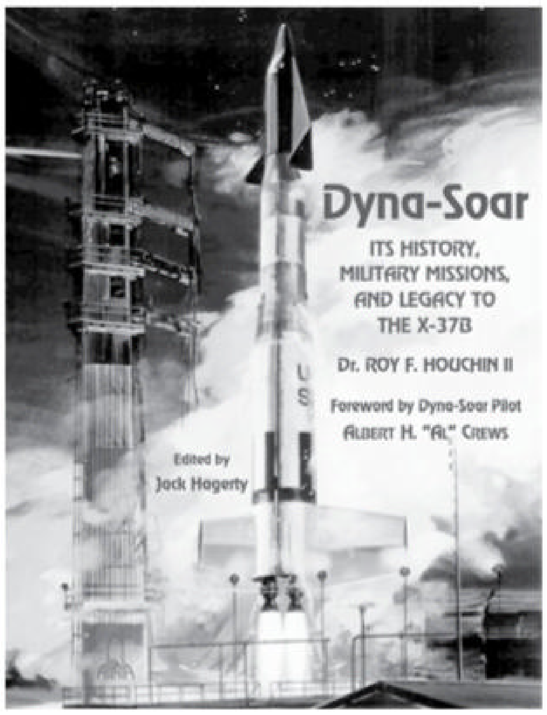
Dyna-Soar
ITS HISTORY, MILITARY MISSIONS, AND LEGACY TO THE X-37B
Dr. ROY F. HOUCHIN II
Foreword by Dyna-Soar Pilot Albert H. "Al" Crews
Edited by Jack Hagerty
U S

- Foreword by Dyna-Soar Pilot Al Crews
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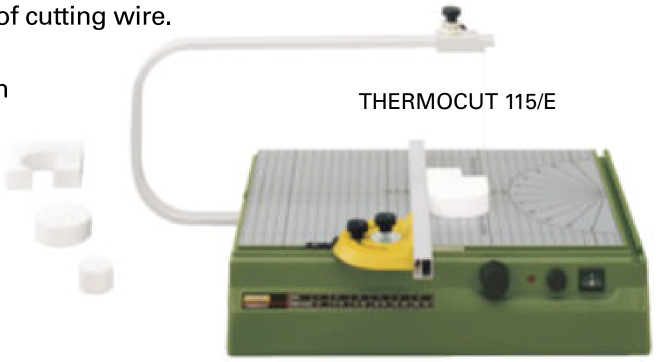
The PROXXON MICROMOT system features more than 50 high-quality power tools and a huge selection of matching accessories.


THERMOCUT 115/E

Please contact us for a free catalog.

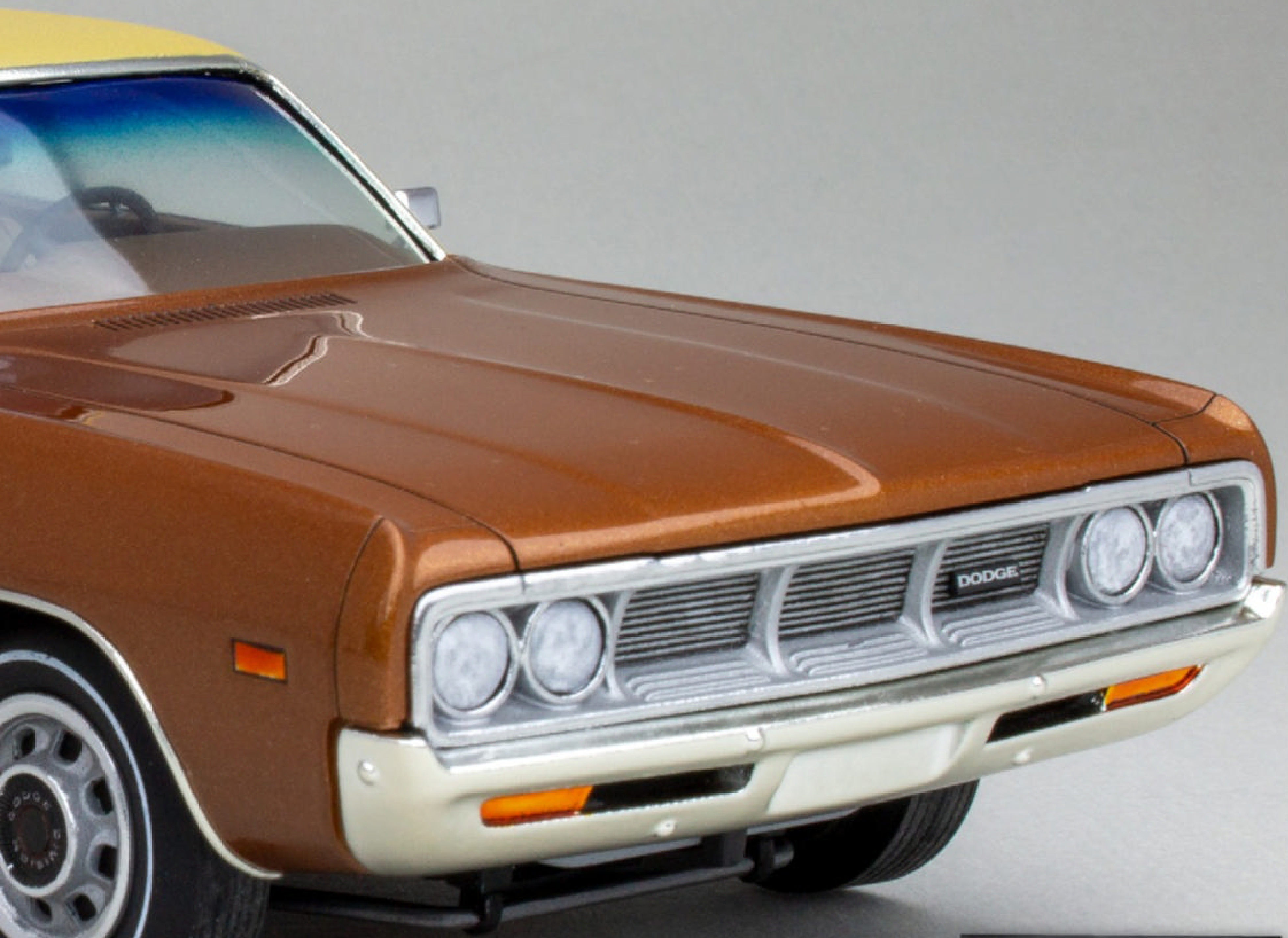
PROXXON — www.proxxon.com/us

PROXXON Inc. – Hickory, NC/USA – Email: sales.us@proxxon.com

Full-bodied FUSELAGE

3D printing makes a 1/25 scale 1969 Dodge Polara 500 a reality

BY JEFF BLOOMHUFF



The 1969 model year saw the Chrysler Motor Corporation unveil a newly designed C-body line up that featured the Dodge Polara, Plymouth Fury, and Chrysler 300, among others. Dubbed the "fuselage look," these were characterized by curved side glass that leaned in at the top of the greenhouse, coupled with body sides that bowed inward at the rocker panels, creating a cylindrical shape that was reminiscent of an airliner fuselage in cross-section. Four years later, with the 1973 models, this design era ended.

Model kit manufacturers have shown some love for earlier (JoHan's Chrysler 300s) and later (MPC's mid-70s Monacos and Road Runners) C-bodies, but these fuselage Mopars have gone unrepresented, save for a few resin offerings. That all changed in recent years when someone, with the help of modern technology, made them available. Like, all of them.

Robert Burns, who operates the Too Many Projects page on Facebook, designs, 3D-prints, and distributes hundreds of different offerings ranging from the 1950s to the year 2263 (a taxi from *The Fifth Element*, anyone?). Not complete kits nor transkits based on existing kits, you get a sharply rendered body, bumpers, grilles, head and taillights, and bucks to form windows. It's up to you to kitbash or scratchbuild the rest.

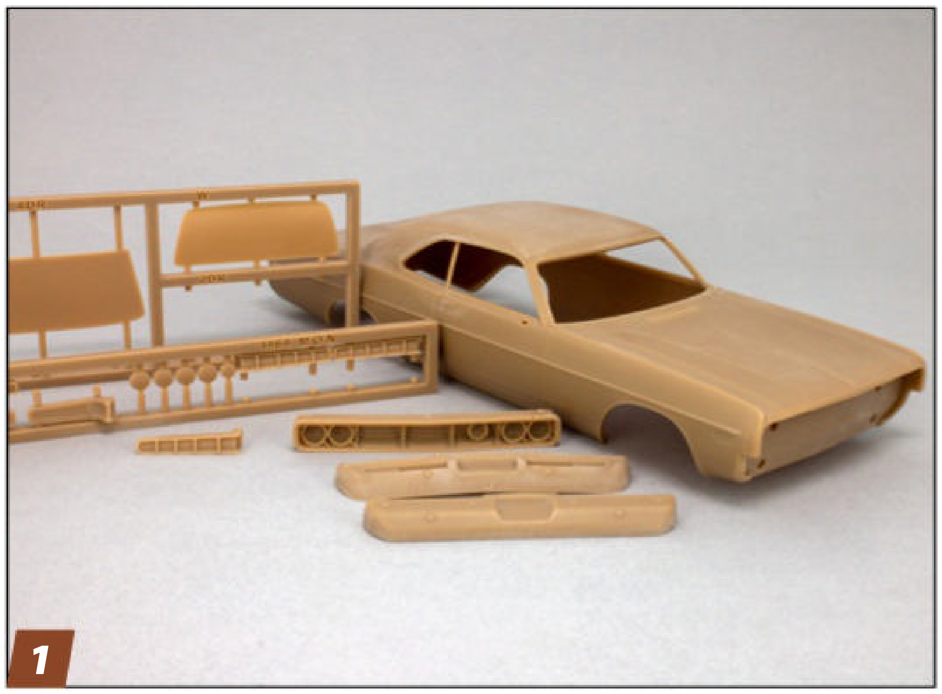
Announcing your next car.

The great new Chrysler.

CHRYSLER

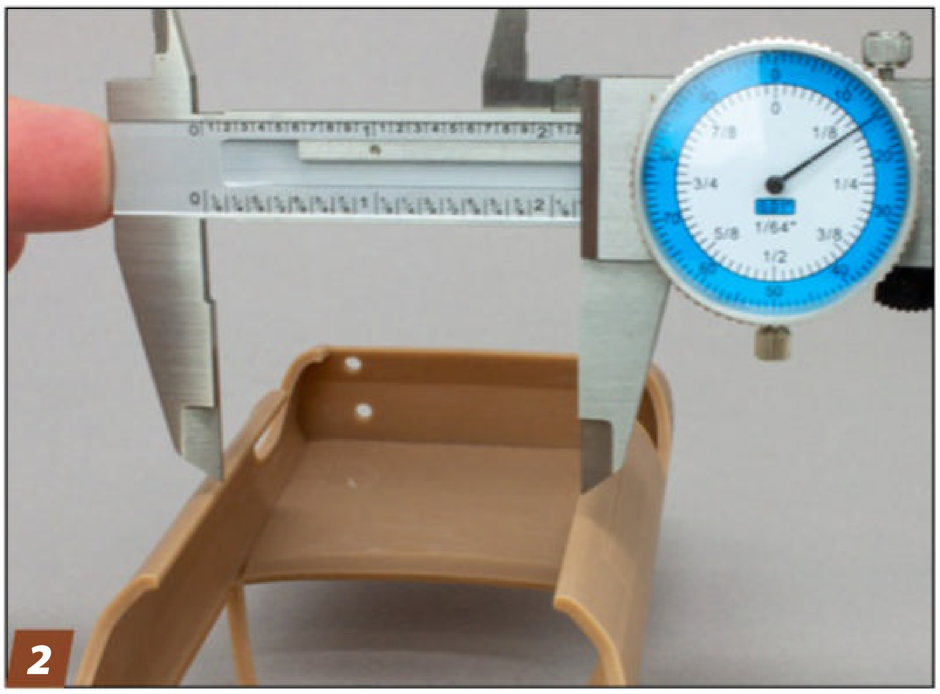
Chrysler ads from '69 to '73 pushed the wide-bodied designs of the fuselage Mopars.

I was very excited to add the big, beautiful, full-bodied Polara 500 to my car collection, but the 3D-printed body needed prep work and a lot of planning would have to go into getting the model just right.



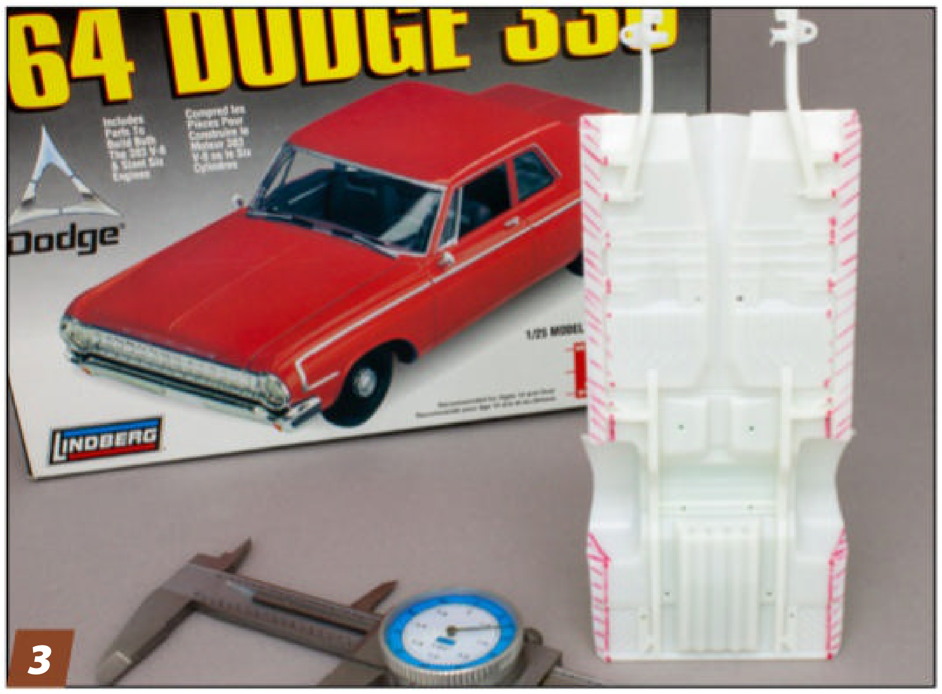
1

Included with the Too Many Projects body are other 3D-printed parts intended for other Polara/Monaco variants, like the sedan and wagon). If the solid headlight lenses are freaking you out, don't let them: a white base coat with a silver wash will have them looking just right.



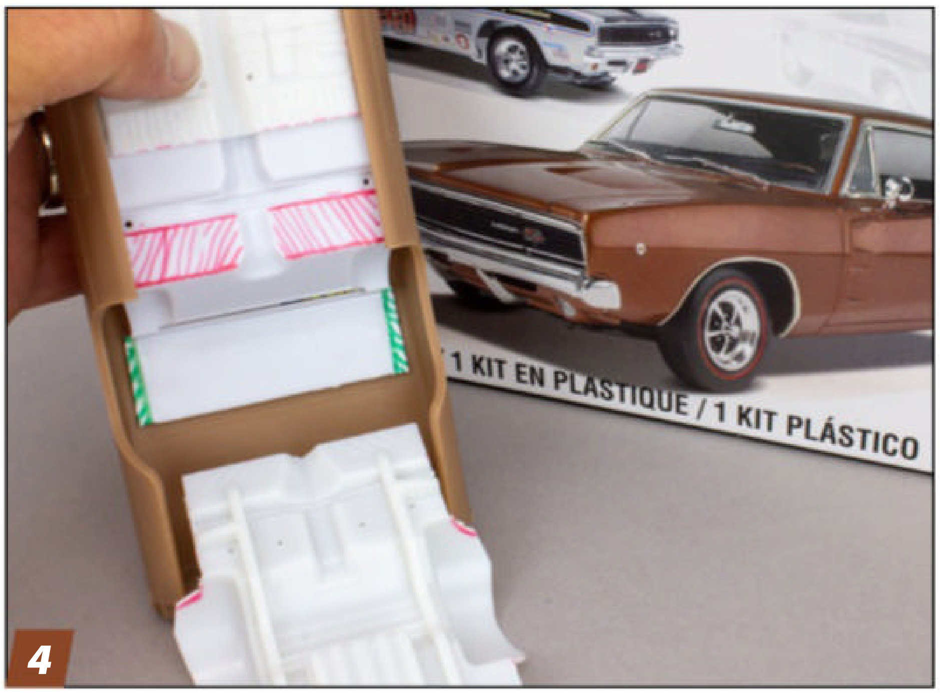
2

Because of the fuselage styling, the sharp curvature of the body sides creates a challenge for adapting an interior and chassis. With help of a ruler or caliper, measure the opening and find a suitable kit chassis that will fit.



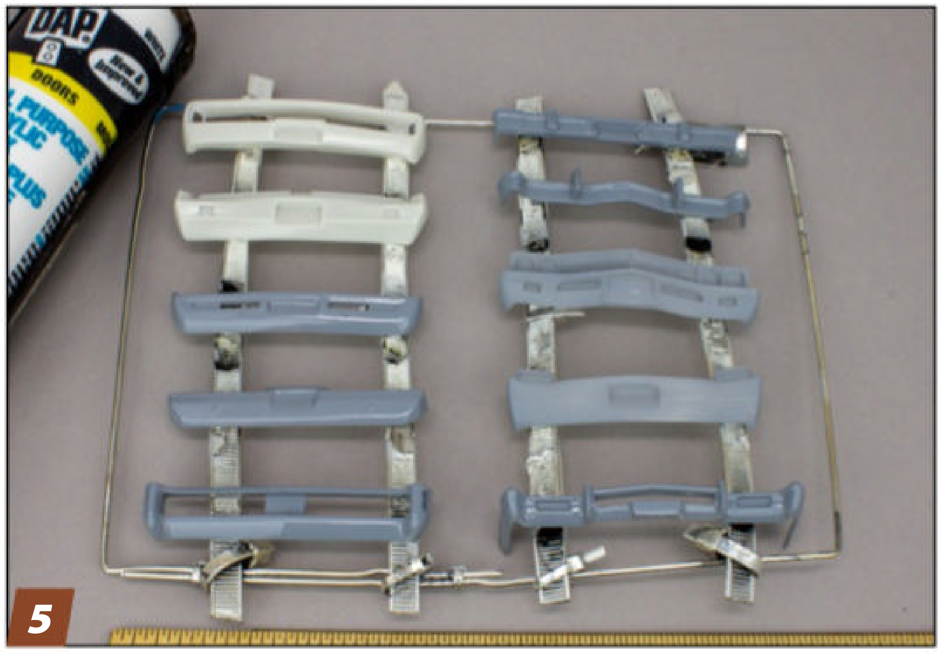
3

This 1964 Dodge 330 from Lindberg has a highly detailed chassis with individual suspension, drivetrain, and exhaust pieces. It can be narrowed and lengthened while still appearing accurate.



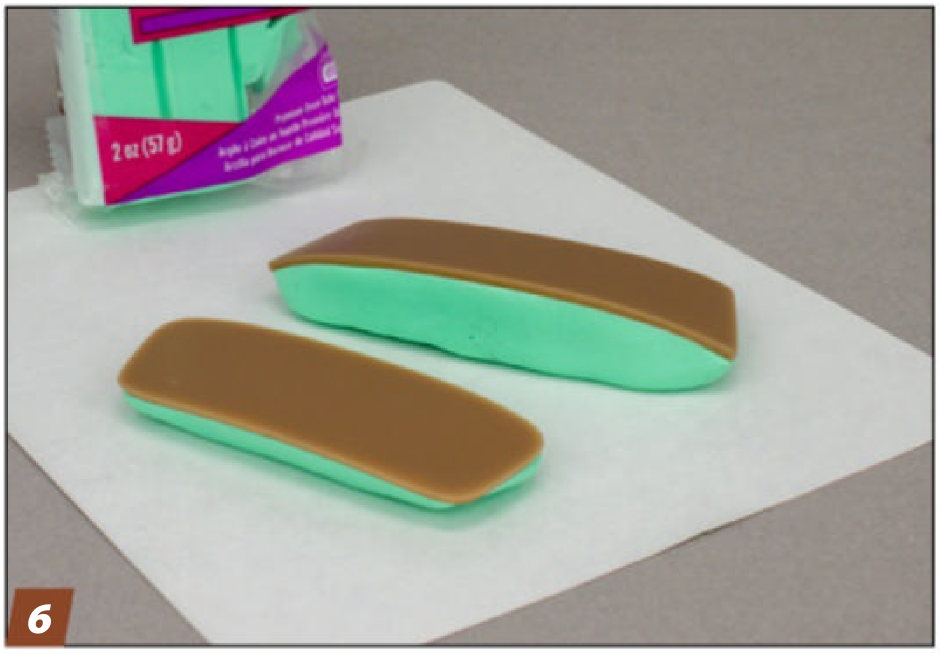
4

I've split the dodge 330 chassis to lengthen it. A good starting point for a '69 Polara interior is the Revell '68 Charger R/T. Remove a section of the Charger's interior plate (red) for better fit against the chassis. Add width to the package shelf with strip styrene (green).



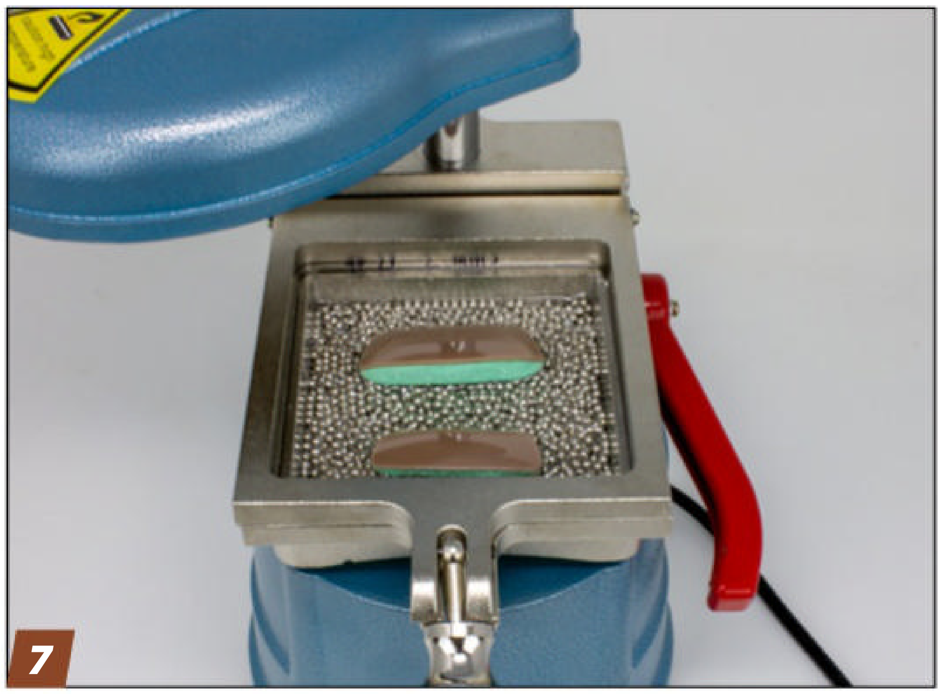
5

Before sending the 3D-printed bumpers to Little Motor Kar Company for chrome plating, I sprayed them with clear urethane to help hide the remaining 3D-printing "grain" after sanding. I attached the parts with a silicone-based caulk to a 6- x 8-inch rack made from a clothes hanger.

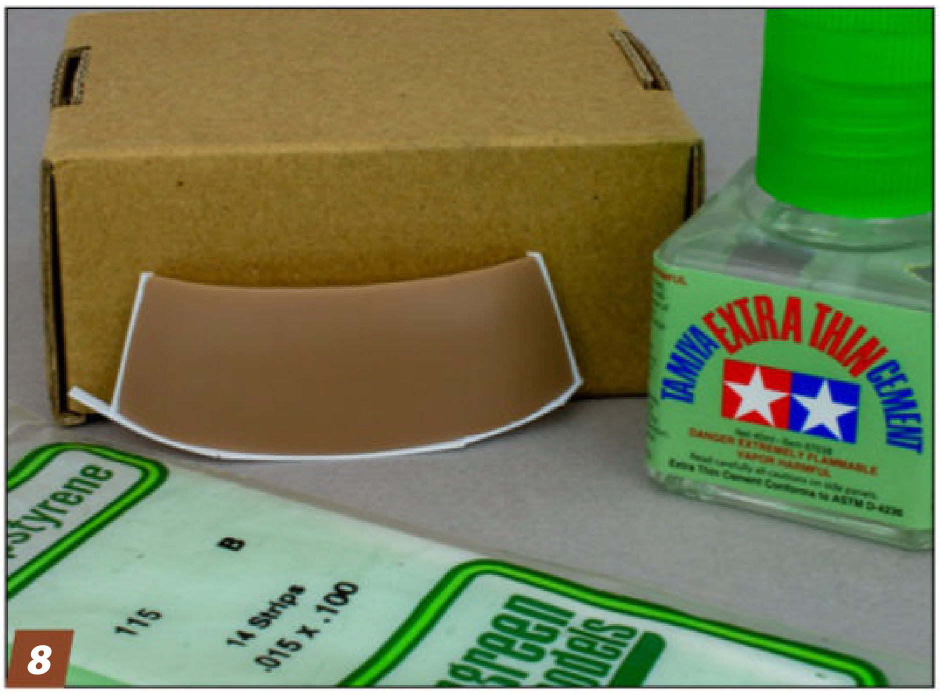


6

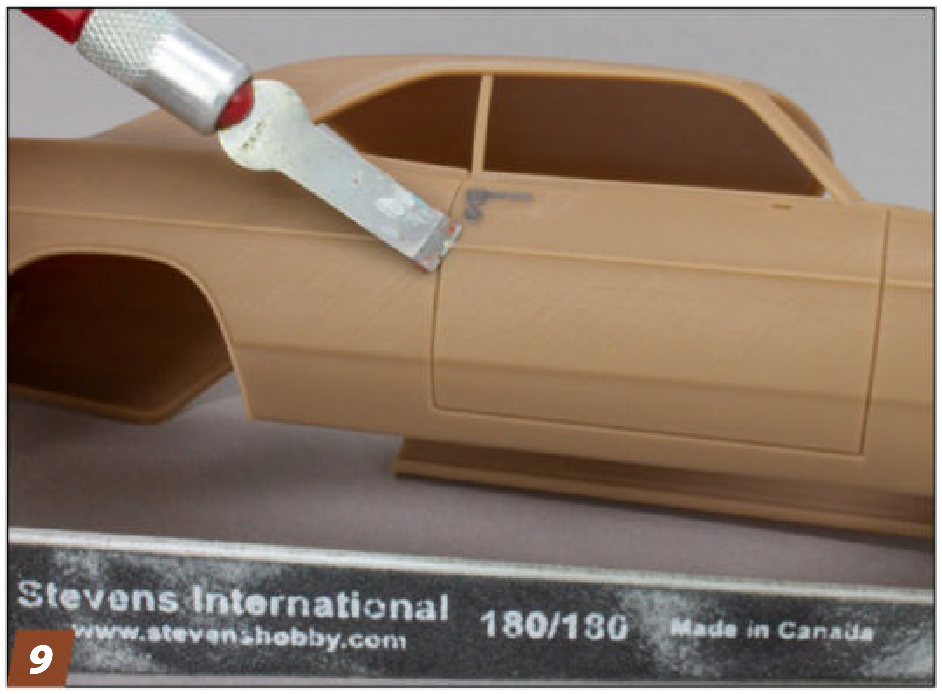
The windshield and backlite bucks need to be elevated so clear plastic can be vacuum-formed over them. Add at least ½-inch of sculpting clay, like Sculpey, under the bucks. Then remove the bucks and harden the clay forms in your oven (follow the directions on the package).


7

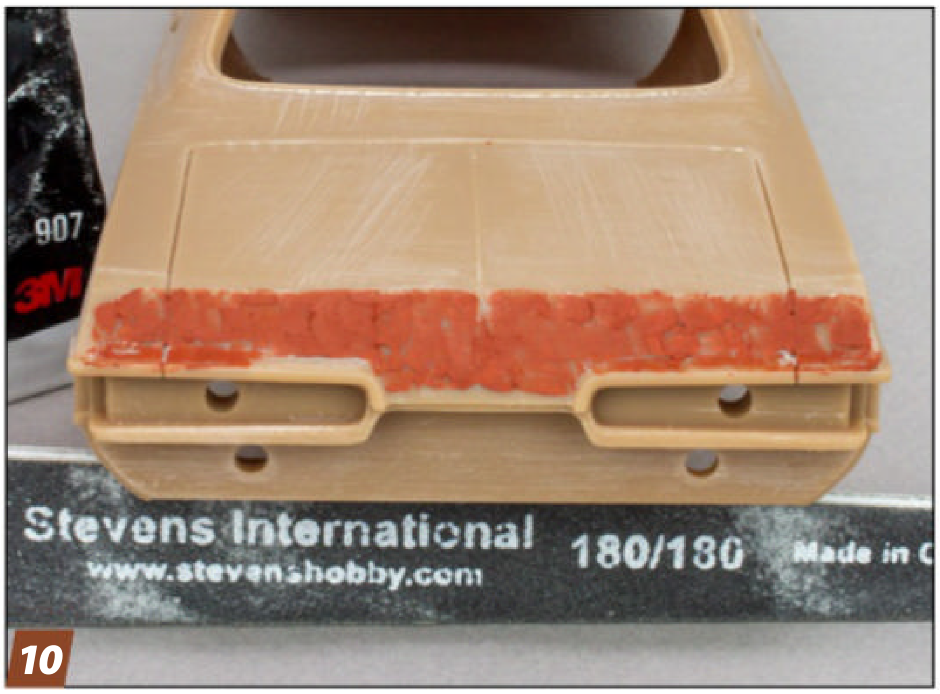
Starting with a sheet of .030-inch PETG plastic, cut a 5- x 5-inch square for use in a vacuum-form machine. Machines vary, but I heat the sheet for about 90 seconds before dropping it over the form.


TAMIYA EXTRA THIN CEMENT
Styrene
115
B
14 Strips
.015 x .100
Evergreen Models
8

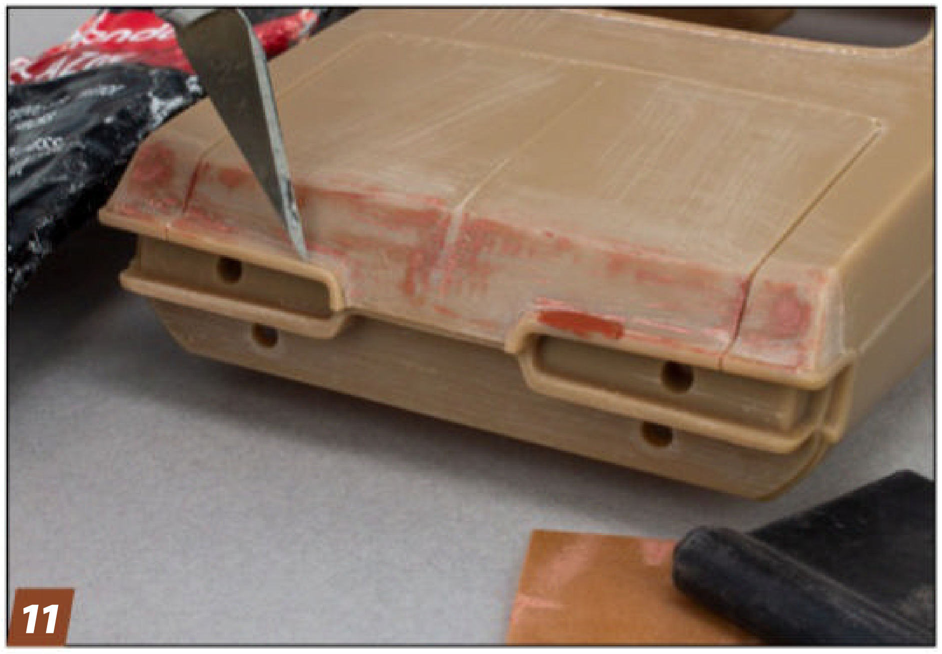
I test-fitted the windshield and decided I wanted it to fit from the inside for better attachment. I added .015-inch styrene strip to the bottom and sides of the buck, filled the gaps with putty, sanded everything smooth with 3200-grit Micro-Mesh cloth, and made a new windshield.


Stevens International
www.stevenshobby.com
180/180
Made in Canada
9

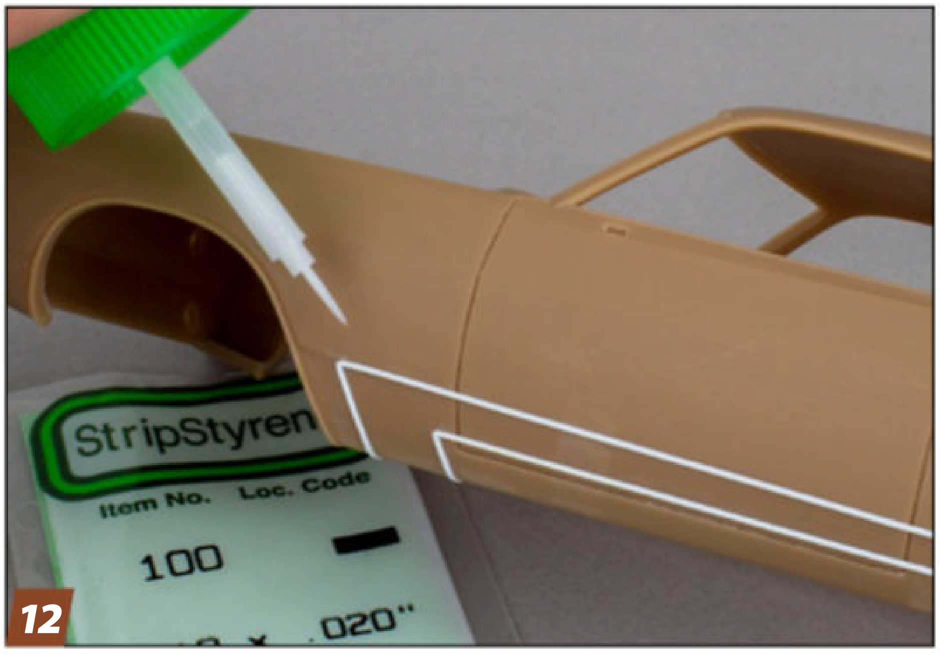
To convert the base Polara to Polara 500 trim, shave the body side moldings and door handles with a No. 17 hobby blade and sand smooth with 180- and 240-grit sanding sticks. Separate, better-sculpted door handles included with the body can be attached with metal pins.


907
3M
Stevens International
www.stevenshobby.com
180/180
Made in C
10

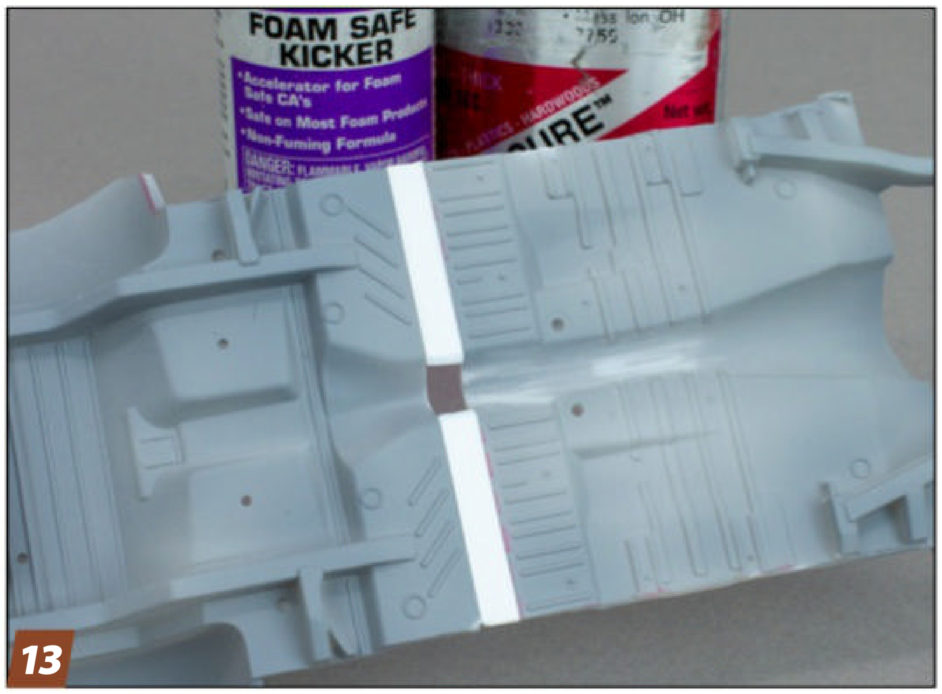
As of publishing, Robert Burns bodies are offered in two quality levels: brown resin (less grain to fill and sand) and white resin (more work to get ready for use). On mine, the entire body needed sanding. The rear of the trunk lid was the worst and required putty to eliminate the grain.


11

Some panel lines, like the signature, chrome-plated taillight bezels, may need to be redefined after sanding the body. Do so by dragging a No. 11 hobby blade backward along the line. When accidents happen — and they will — add putty and try again.

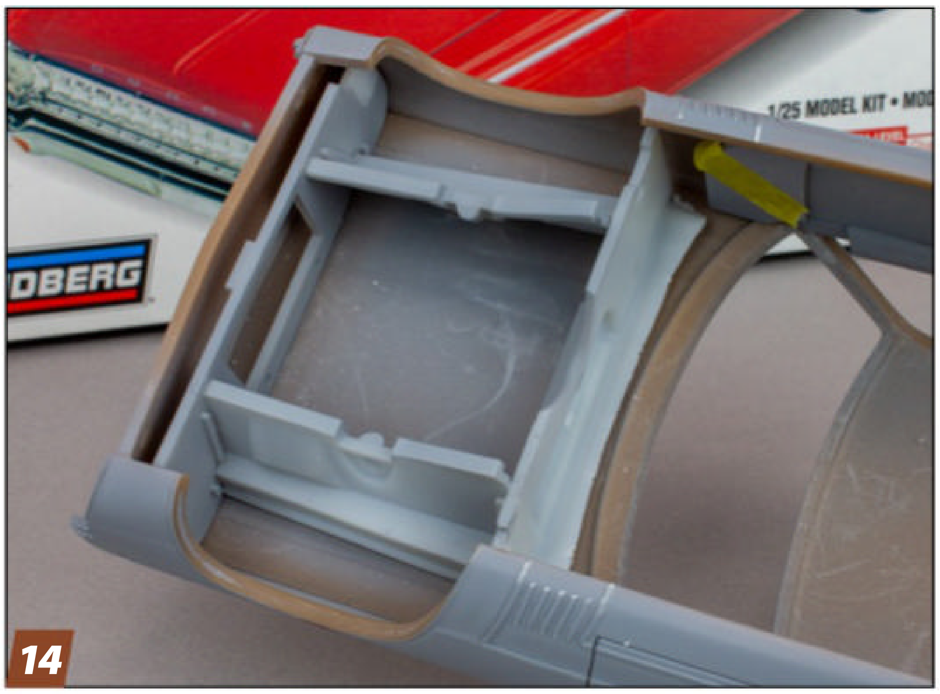

StripStyren
Item No.
Loc. Code
100
.020"
12

I find Tamiya Extra Thin Cement, with its in-cap applicator brush, excellent for bonding styrene to 3D-printed parts. The same .010- x .020-inch strip can be used for the rocker panels and the trim for the vinyl top.


FOAM SAFE KICKER
Accelerator for Foam Safe CA's
Safe on Most Foam Products
Non-Fuming Formula

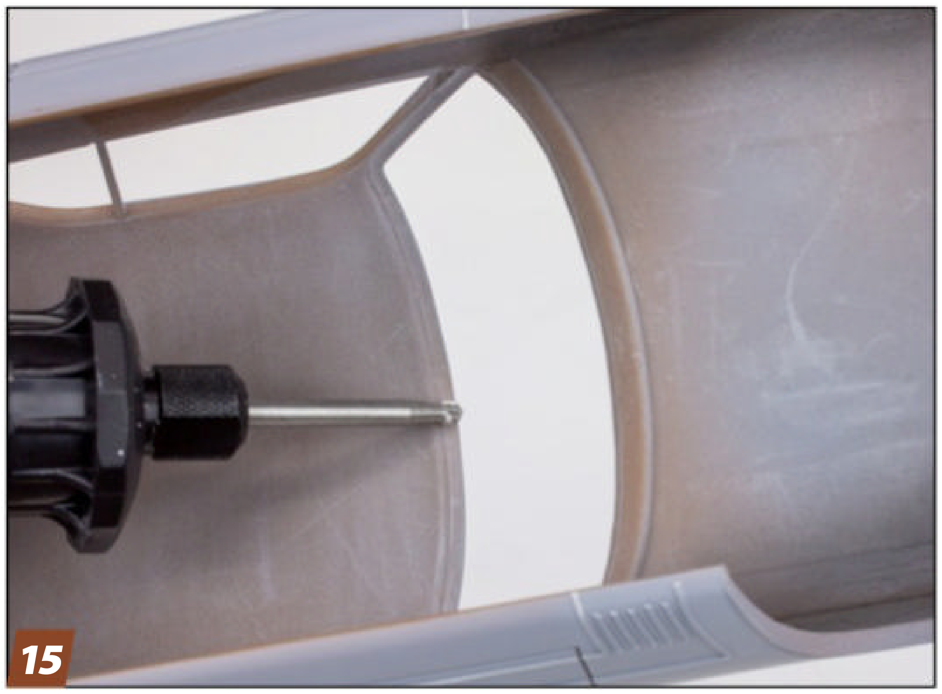
13

To lengthen the chassis plate, cut in a location with no molded. Then fill the space with .040-inch-thick styrene for the flat sections and apply a generous dose of superglue and accelerator followed a splash of accelerator. Fashion the driveshaft hump with Milliput.


DBERG
1/25 MODEL KIT • MO

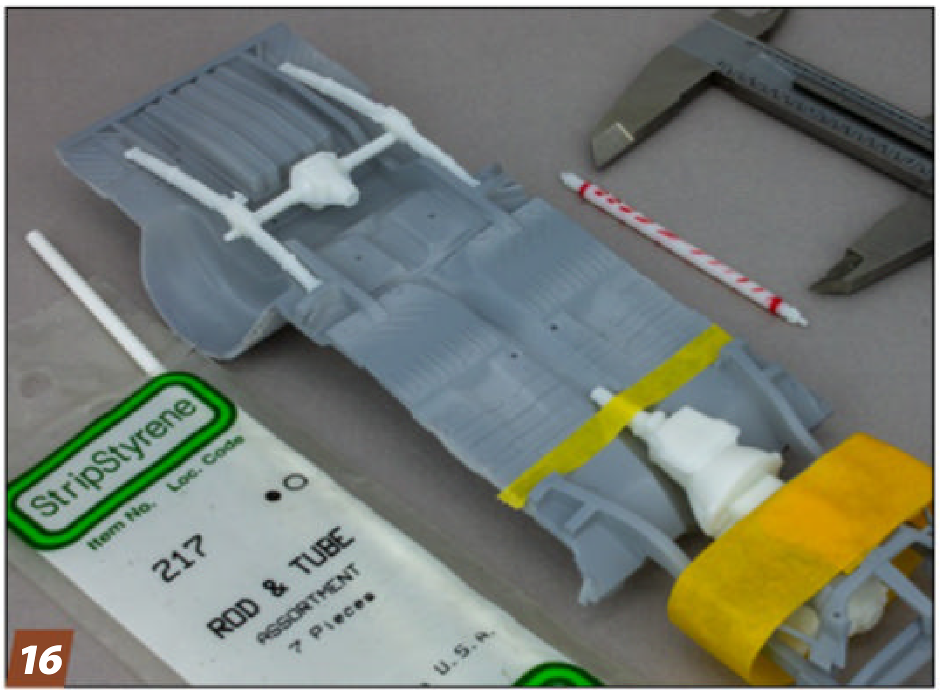
14

The doghouse of the '64 Dodge slips right into the body with very little trimming. Although the hood is molded shut, the underside of this build will look complete.



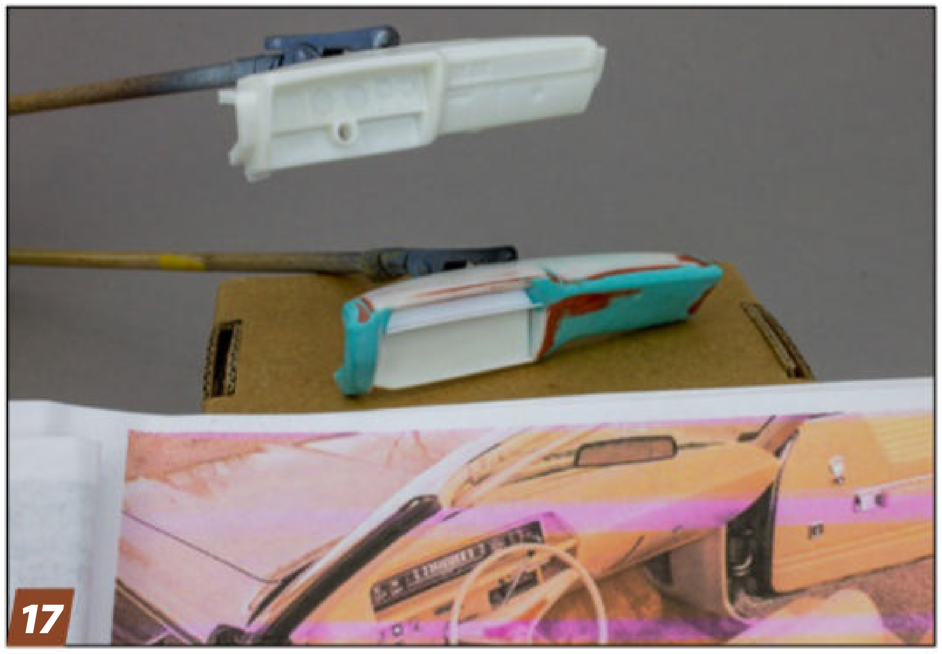
15

Using a rotary tool with 1⁄16-inch engraving bit, remove enough material from behind the windshield moldings so that the vacuum-formed glass fits as tight against the frames as possible. Go slow and remember to wear eye protection.


StripStyrene
Item No.
Loc. Code
217
ROD & TUBE
ASSORTMENT
7 Pieces
U.S.A.

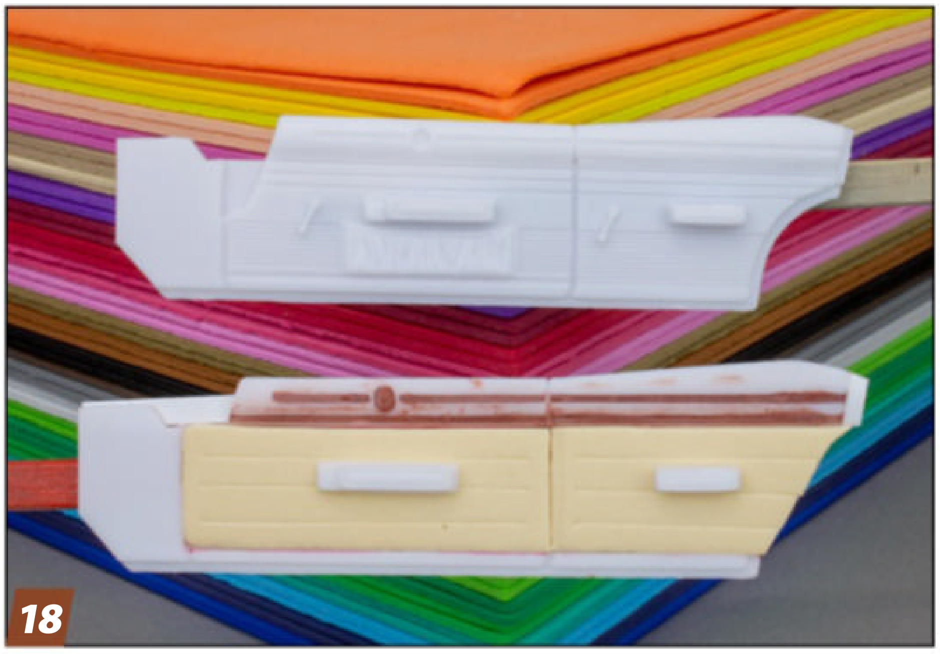
16

Lengthening the chassis means the driveshaft has to be lengthened, too. Cut off the yoke and U-joint from each end and make a new shaft of the appropriate length from .125-inch tube and attach the yoke and U-joint to the ends. Lengthen the '64 Dodge kit's exhaust the same way.



17

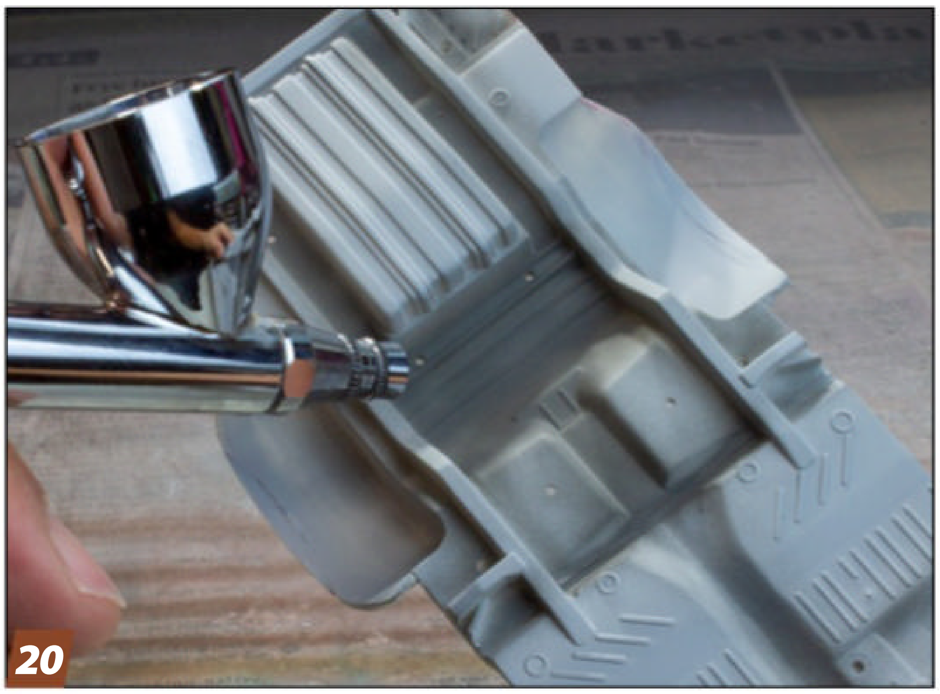
Starting with the dashboard from an MPC 1978 Dodge Monaco CHP (No. MPC922M), remove the gauge portion and add styrene sheet and Milliput to better reflect the shape of the '69 unit. Print a few images from the internet for reference.



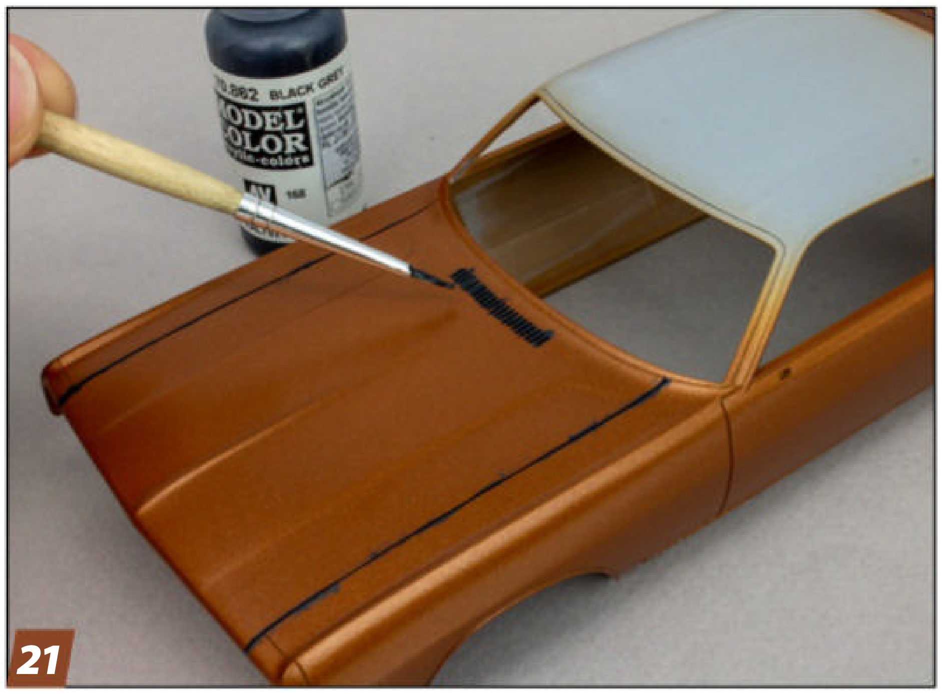
18

Starting the with Charger R/T door panels, replace the existing midsection with craft foam available from art supply stores. Practically any pattern can be carved into it with a hobby knife, and it can be painted with acrylic paint.

After perusing the internet for color inspiration, I turned to the *MCW Automotive Paint Reference Guide*. It displays all factory color options for '69, including the color code and unique name. Spraying colors onto spoons helped the decision-making process.

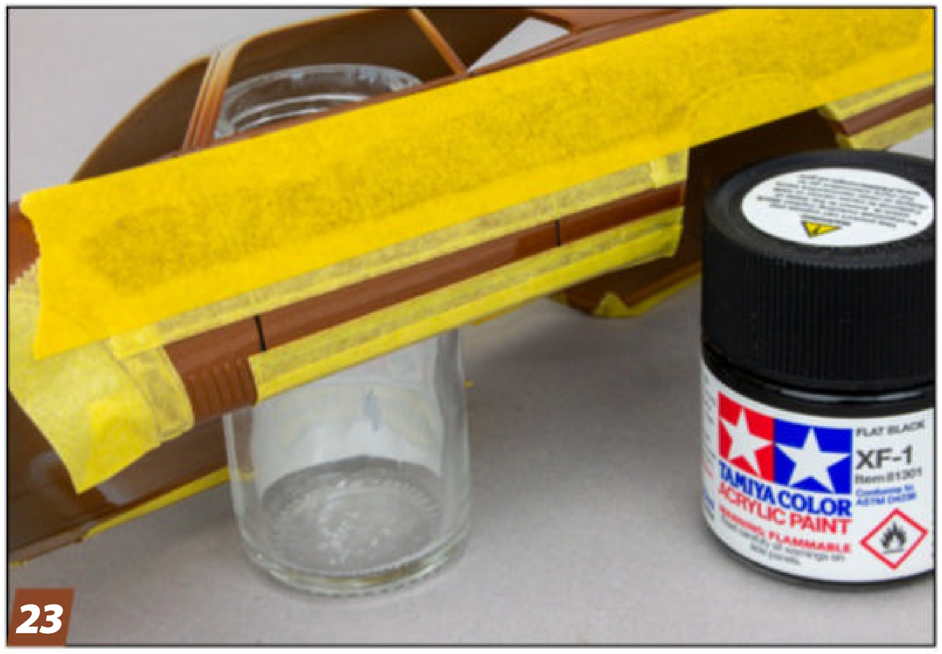


After a base coat of gray primer, select a darker shade of gray and mist it into the deep, recessed areas of the chassis. It creates visual depth and looks more interesting than one solid color.

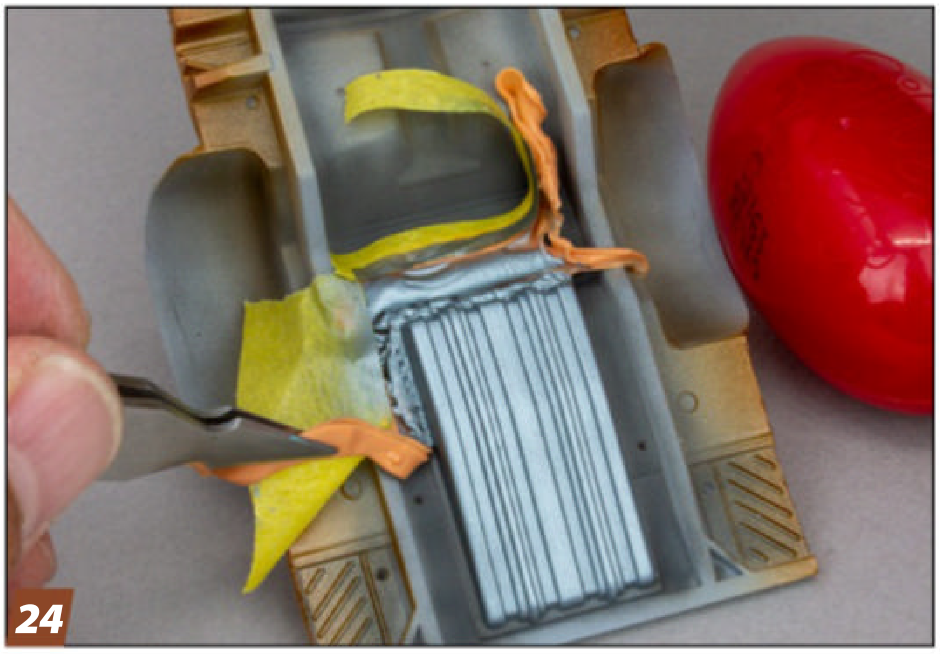


There are many different ways to darken panel lines, but I prefer to apply a generous stroke of Vallejo Black Grey (No. 70.862) acrylic paint and remove the excess with thinner. This is done before the clear coat is applied.

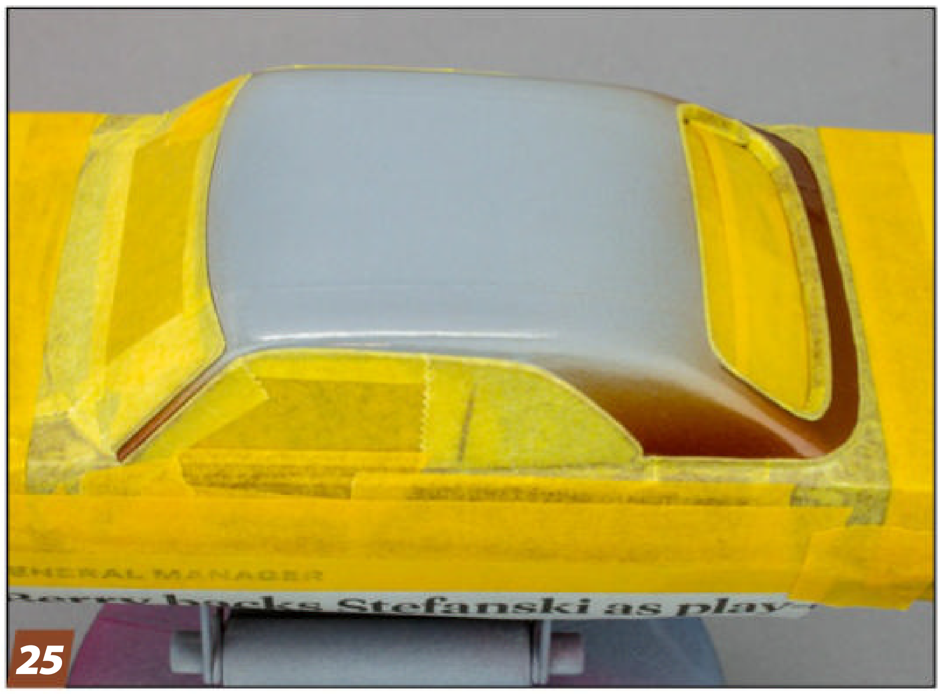
I airbrushed two coats (one medium-wet, one very wet) of PPG Omni Urethane clear on the body. Make sure to coat all the metallic trim to help Bare-Metal Foil stick. After three days of curing, I wet-sanded the body with 4000- to 12000-grit Micro-Mesh cloths and polished it.



Mask and spray the decorative side trim flat black so they contrast with the high-gloss of the body color.

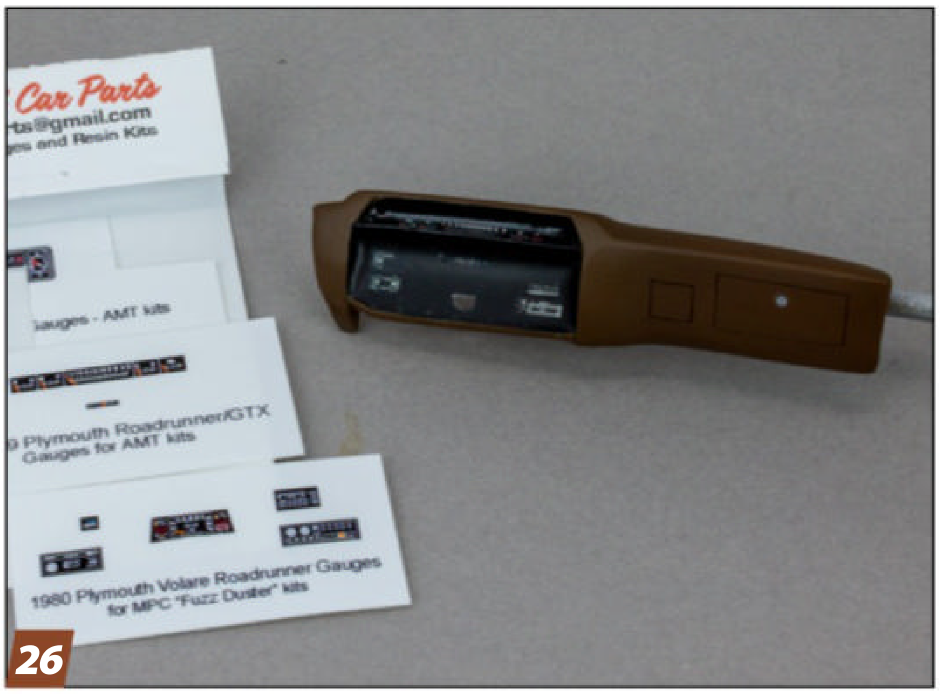


Use Silly Putty to mask difficult areas, like the perimeter of the gas tank. Testors Metalizer Steel, followed by a semi-dull coat, colors the tank. Mist the body color (Saddle Bronze Metallic in this case) onto the edges of the chassis at a low angle to mimic factory overspray.


Berry backs Stefanski as play-
GENERAL MANAGER

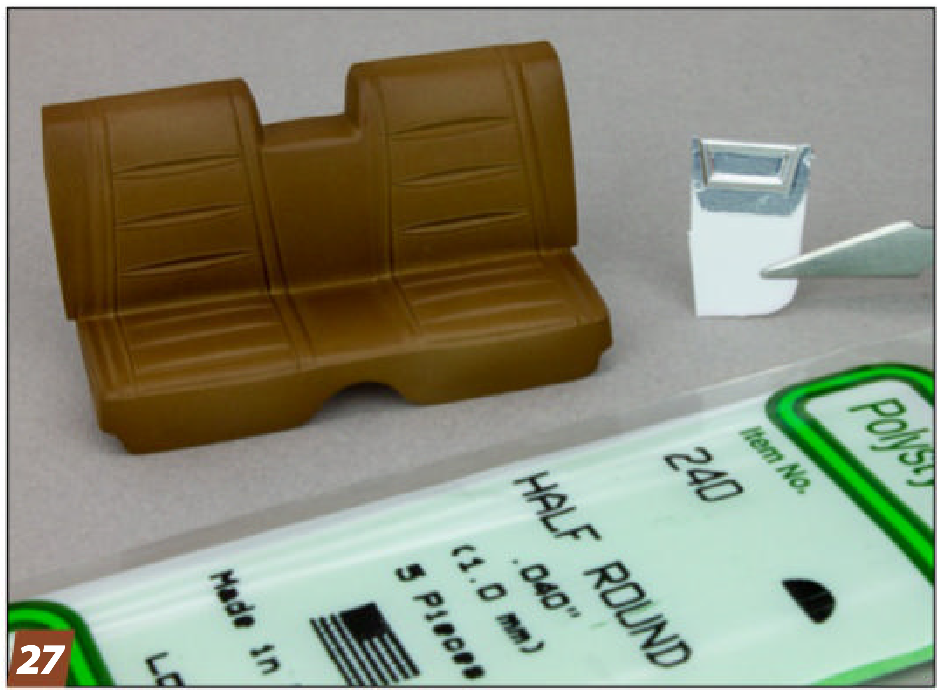
25

Before painting the roof — I used MCW textured vinyl roof paint — mask all the stainless steel and chrome trim. Tamiya tape is a great choice for avoiding any paint bleed, while lesser-quality tape and newspaper can cover the rest of the body.


Car Parts
rts@gmail.com
ges and Resin Kits
Gauges - AMT kits
9 Plymouth Roadrunner/GTX Gauges for AMT kits
1980 Plymouth Volare Roadrunner Gauges for MPC "Fuzz Duster" kits

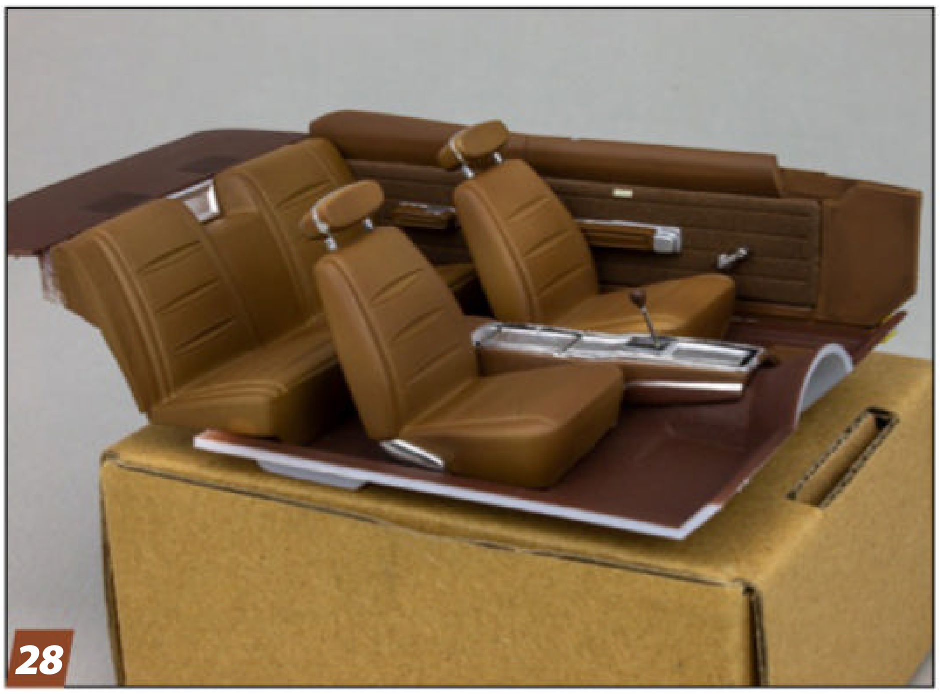
26

Best Model Car Parts offers numerous dashboard gauge decals that can be pieced together to achieve the right look. I oozed two-part epoxy onto the gauge surface to replicate a clear laminate cover. Scribe the ash tray and glove box into the dash with the aid of straight edge.


Polyst
Item No.
240
HALF ROUND
.040"
(1.0 mm)
5 Pieces
Made in

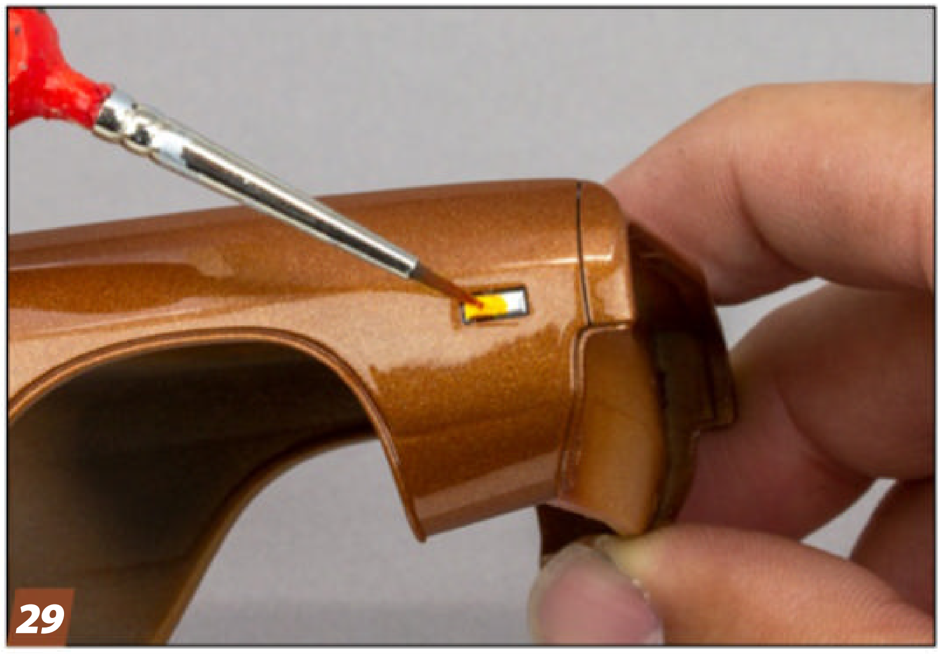
27

The Polara 500 has a gap in the back of the rear bench seat. Cut the gap with a razor saw and fill it with Milliput. Styrene sheet and .040-inch half-round strip serves well to make the trim to fit in the gap. Cover it with Bare-Metal Foil for a bright, realistic look.



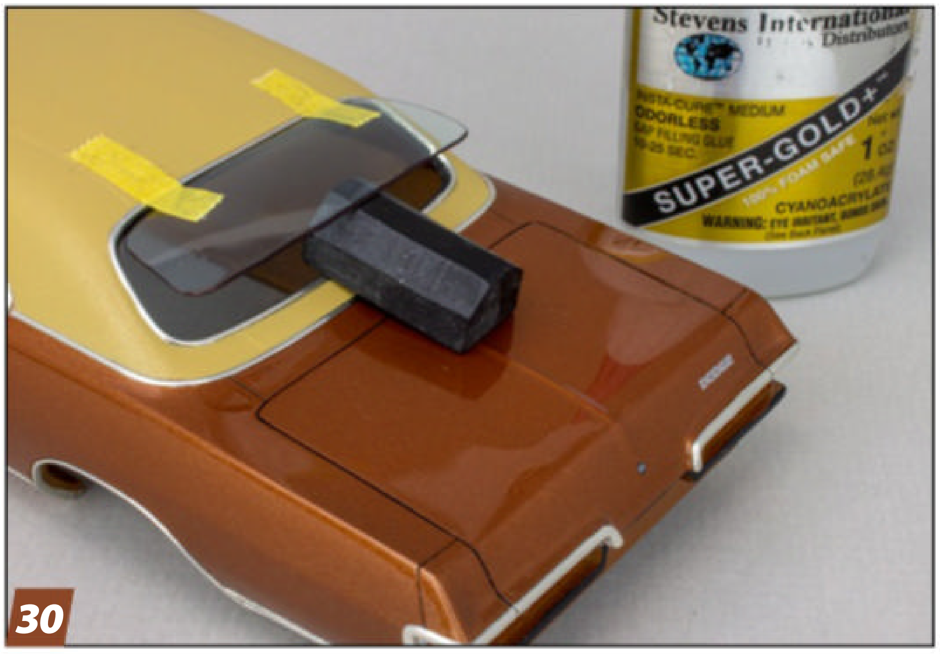
28

You can make a convincing shift lever from a shirt pin. I had an automatic gear selection decal in my spares to round out the interior.



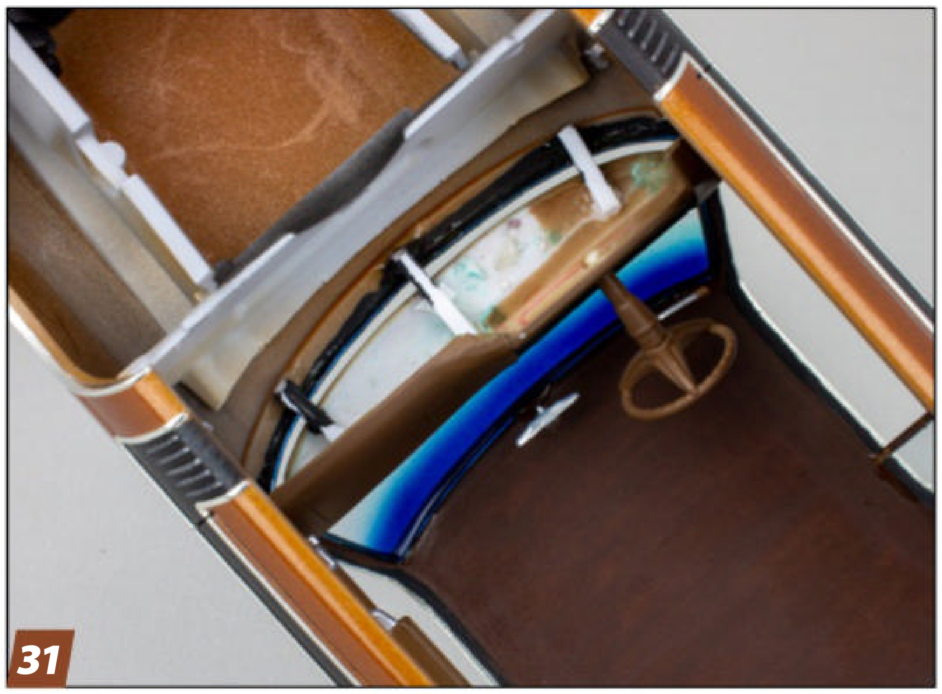
29

Place Bare-Metal Foil on the molded marker lights and then go over each with Tamiya Clear Orange (No. X-26). I proceeded to place Bare-Metal Foil on all of the car's metallic trim.


Stevens International
SUPER-GOLD+
ODORLESS
CYANOACRYLATE

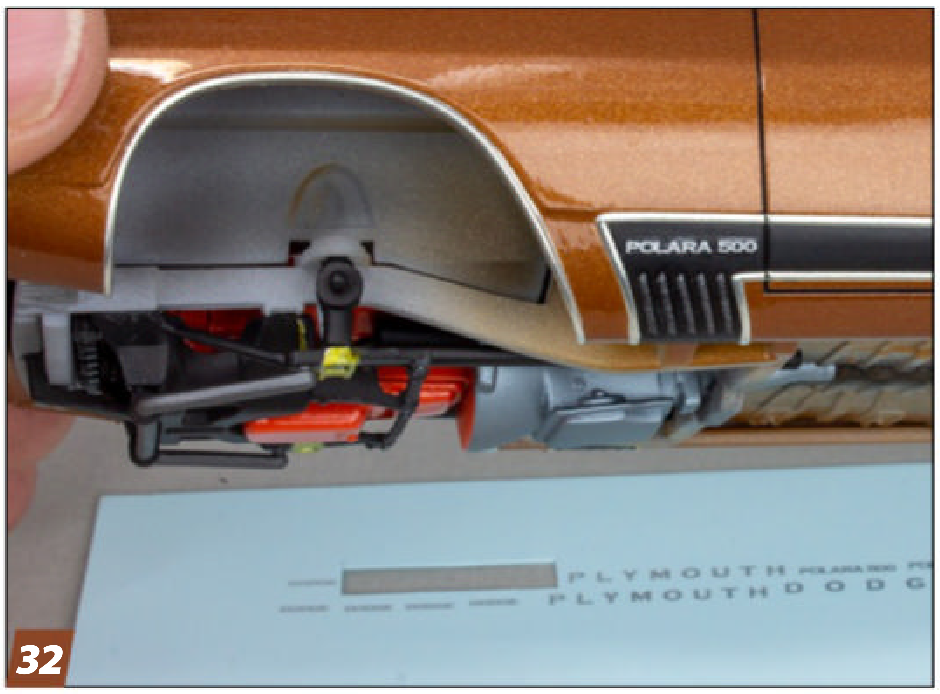
30

Unlike the windshield, the backlite is a drop-in fit, and a stressful one at that. First, line the edges of the window with a black Sharpie. Hinge the top of the glass with low-tack masking tape, dab the four corners with medium viscosity superglue, then drop it in place.



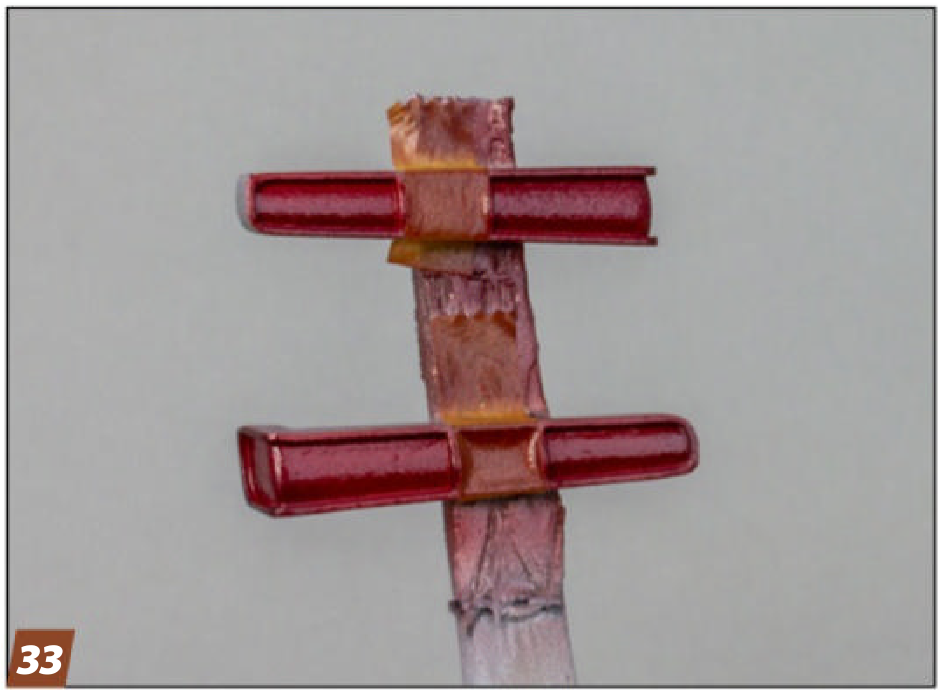
31

Attaching the dashboard was a bit of an afterthought in my process. Crudely, I made three mounting points with square styrene rod attached to the underside of the cowl panel. This support kept the dash snug against the bottom of the windshield.



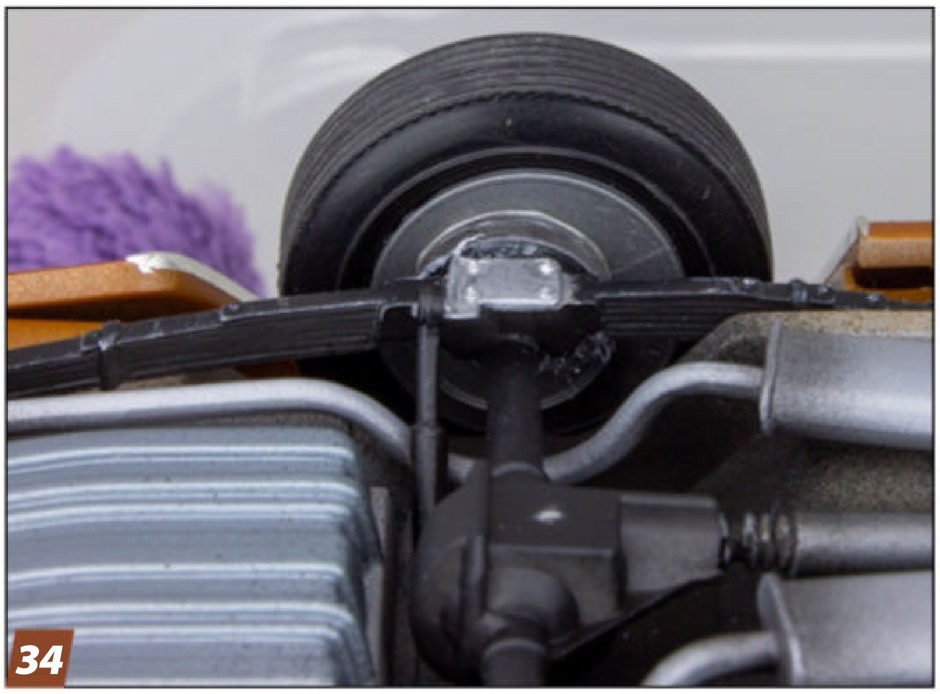
32

The Robert Burns body didn't have any scripts or badges on it. I designed chrome-looking Polara 500 and Dodge decals on my computer and printed them on an ALPS printer.



33

Layering Vallejo Flat Red (No. 70.957), MCW Vintage Burgundy Metallic (No. 6738), and Tamiya Smoke (No. X-19) creates a convincing reflective look. After they're installed, pick out the ridges with a 1mm Molotow Liquid Chrome marker.



34

Another afterthought in my process was wheel attachment. I added styrene disks to push the wheels out, and the wheel backs were cheated up and forward to center them in the wheel openings.

FINAL THOUGHTS

THIS BIG DODGE DRAWS FROM THE SAME color palette and factory options as the Chargers and Challengers in my model collection. For me, it's like a long-lost piece that finally completes a Mopar puzzle — a glimpse into what a dealership might have had on the showroom floor to offer shoppers back in '69. **FSM**

Roy's "Army Truck" is about 95% 3D-printed parts. The rear tires and wheels and less than a handful of other parts came from styrene kits.

Get started with 3D PRINTING

Take your first steps into a wider world

BY ROY SORENSON

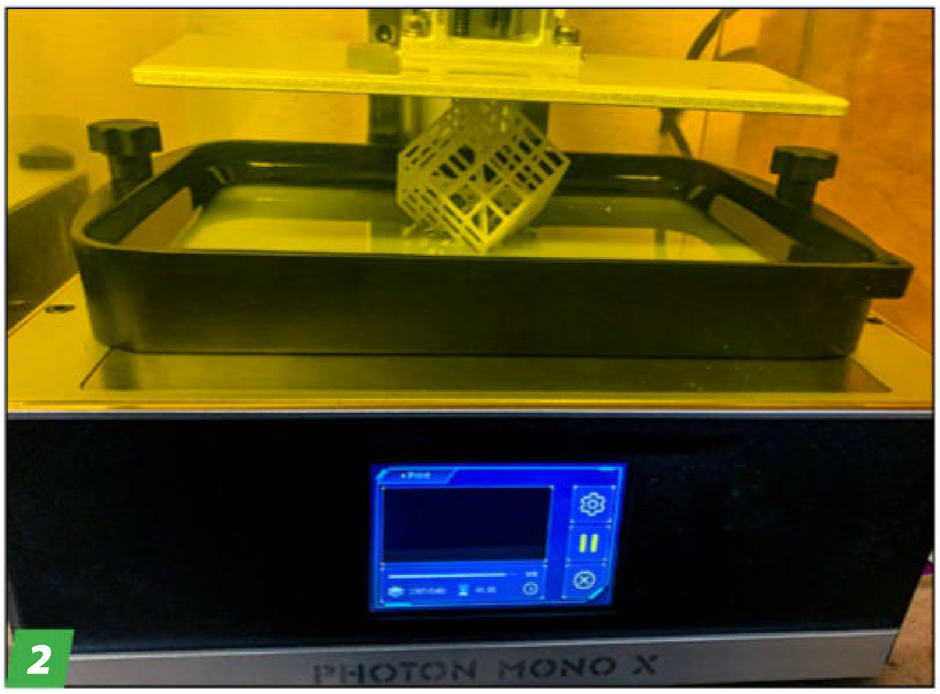
No matter what you think of it, 3D printing is becoming a big part of scale modeling. Like home computers, you can bet 3D printers will likely be in every household. But which printers best fit our modeling? I spent weeks researching 3D printers before I bought mine, looking at the pros and cons of spool versus resin bath (SLA) printers, the different sizes available, and so on. I contacted modelers who were already using 3D printers and asked them questions, watched YouTube video reviews, and surfed the internet to compare prices.

After all this research three things became obvious: First, I was going to go with an SLA printer rather than a spool-fed model. Second, I was going to get the biggest printing plate I could afford. And third, people were really happy with their Anycubic printers. Come Christmas 2021, Anycubic was having a sale on the Photo Mono X (its biggest printer at the time), and it included a wash and cure station. I did not hesitate and immediately ordered the combo, ***1***.

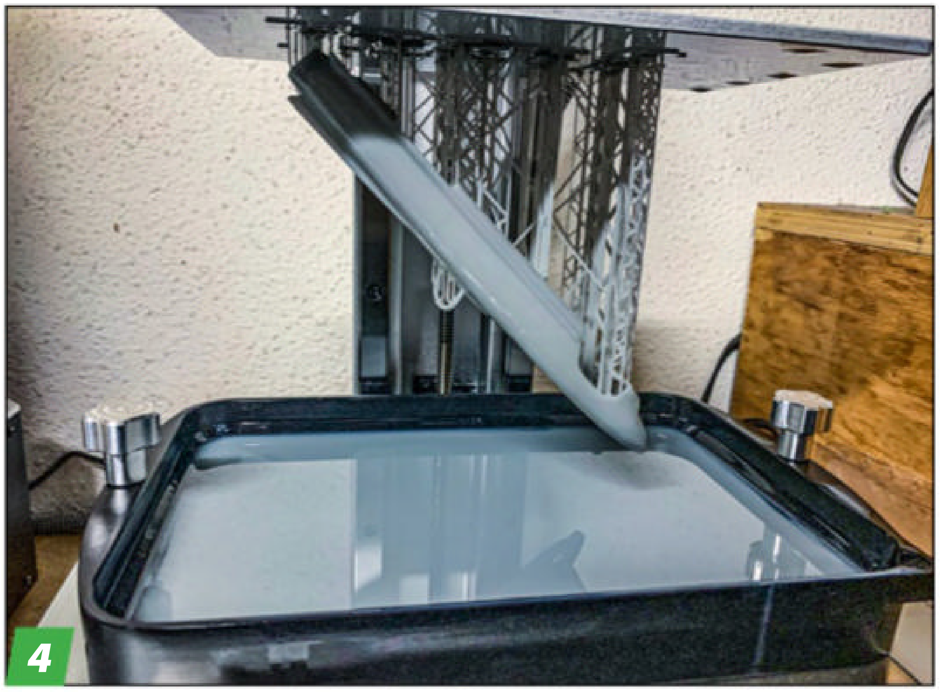
How does an SLA printer work?

Most people are familiar with the older-style, spool-fed 3D printers that leave a rough surface and are not particularly good for printing fine details. An SLA printer uses a UV laser that projects the shape of

1
I house my Anycubic wash and cure station and SLA 3D printer in the garage where I can open the doors for ventilation. I plug both of them into a surge protector as a precaution. If you keep your printer in a cool area, make sure the ambient temperature is above 60 degrees F, or the resin pulls moisture out of the air and causes bad prints.


2
You can see this cube is attached to the plate that slowly rises out of the resin as the part is printed. I use about four quarts of Siraya Tech Fast resin a month. While you are printing, it's important to check your progress every hour or so. If your part fails to print properly, stop the printer.

3
One of the things I love about 3D printers is that you can use a flash drive (otherwise known as a thumb drive) to transfer your files from the computer. No need for your computer to be tied up printing files for hours.


4
Position parts with long, straight lines, like this 1/32 scale Cadillac Cyclone convertible body, at an angle to prevent the printer from separating the last few layers along the edge. The more support rods, the better, but keep them inside the body.

the printed part or model onto a steel plate through a photopolymer (clear bottom) container full of liquid resin. The resin layer hardens to form an individual layer. This process is repeated over and over creating the many layers that ultimately form the model. Once the model is complete, you remove it from the plate, wash the part clean, and cure it with UV LED lights. This type of printing leaves a smoother part with better detail: perfect for modelers. If you want to print large ship hulls, big figures, or car bodies, you're going to want to order the biggest plate surface you can afford, ***2***.

Do you need to know CAD?

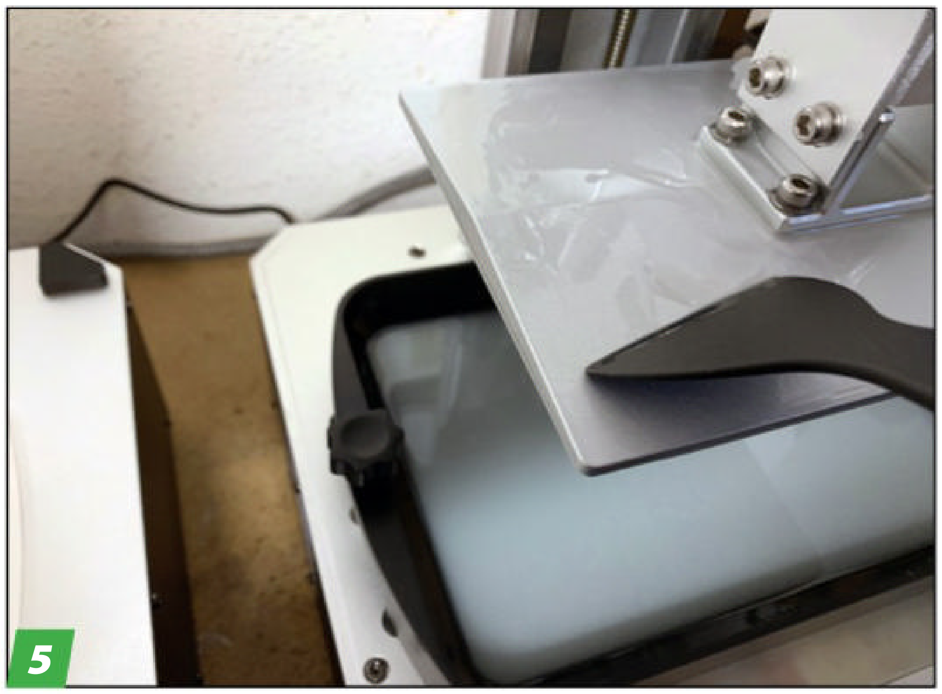
Not at first. As of writing this, I've had my printer for nine months, and I have yet to design a part for printing. There are plenty of websites with tons of 3D STL files for sale. In my case, I'm always looking for car parts and bodies. You pay for the STL file and download it to your computer. (Start a folder to keep these files in order. You'll thank me later!)

You will need a "slicer" program in order to print the STL files. The slicer program does just what its name implies: slice your part into hundreds of layers so the printer can make it. This program also allows you to layout multiple parts and resize them for different scales. I started with the program that came with the printer, but you can also download free versions of Fusion 360 or Blender, and I would recommend the latter for a beginner.

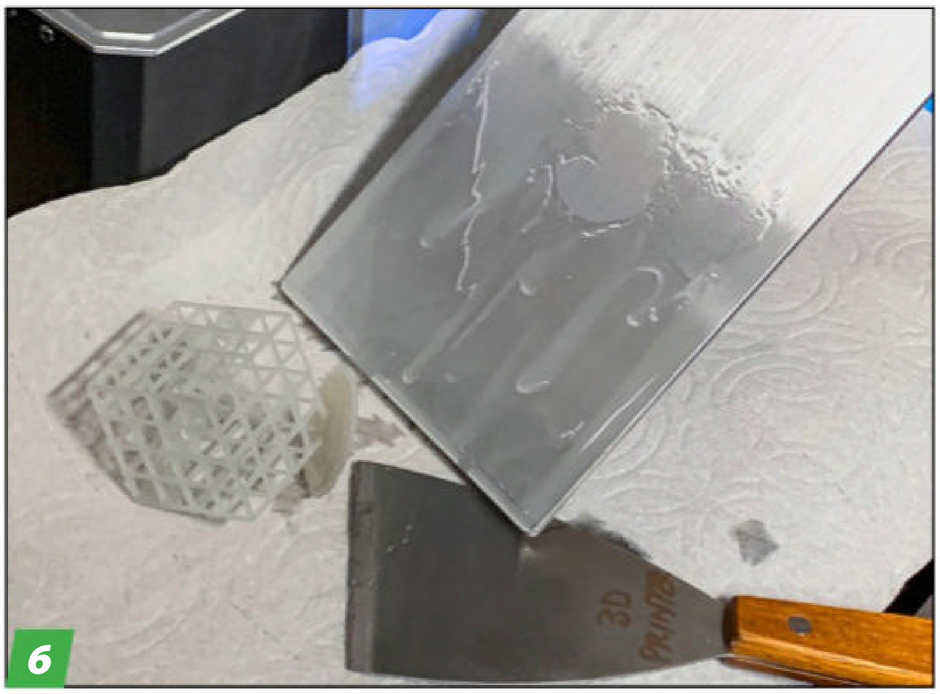
After the program creates the sliced file, you can transfer it to a thumb drive, plug it

A few words about safety

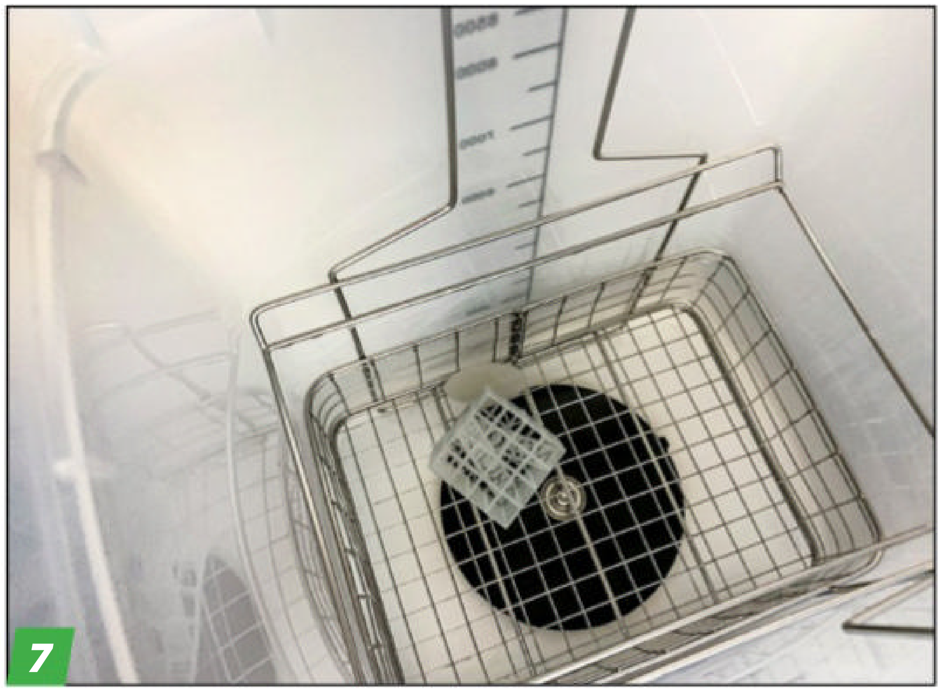
ALWAYS READ AND FOLLOW the safety precautions and operating instructions for your printer, curing station, and whatever resin you're using. Make sure your printer is in a well-ventilated area because the resin stinks! When working with resin, always use gloves, eye protection, and a respirator. Remember, resin does not break down in your lungs. If you are sanding resin parts, that dust can enter your lungs and create respiratory problems.



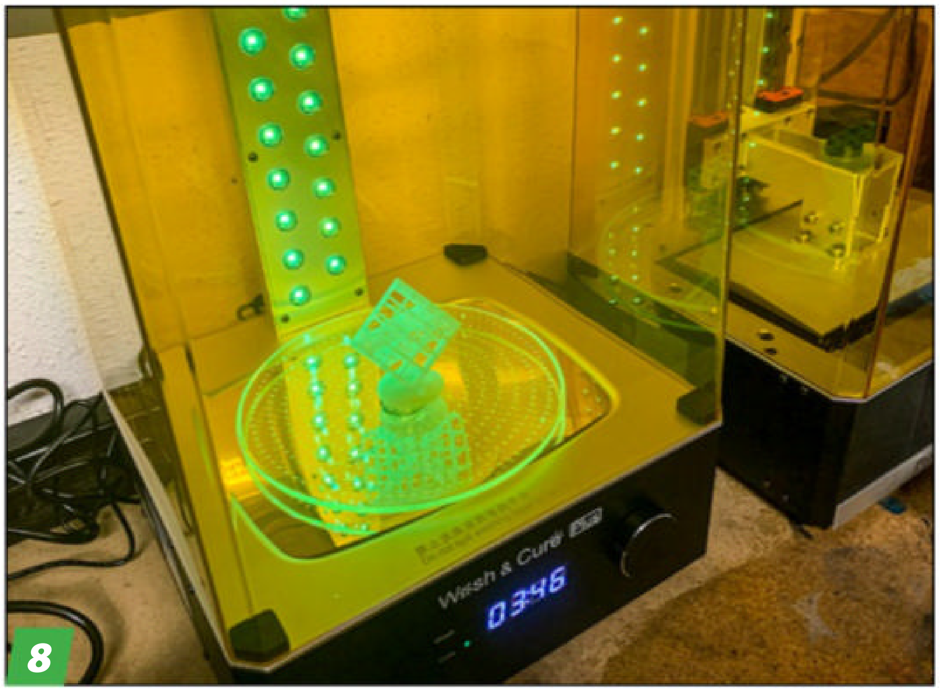
The plastic spatula should only be used to scrape the resin from the top of the printing plate. Never use it on the clear photopolymer on the bottom of the vat! It will scratch it and that means bad prints.



Remove your prints from the plate with a metal spatula — the plastic one would probably break. Clean the plate thoroughly before putting in back on the printer.



Fill the wash basin with a 90% solution of isopropyl alcohol — if you plan on doing large prints, plan on buying two gallons. Place the parts in the basket and lower it into the solution. Set the wash for six minutes and let the machine work.



After setting the system to "cure" and replacing the cleaning basin with a clear plate and the part place in the middle. Make sure the UV lightbar is aimed correctly, but the cover back on, and set the timer for four minutes. The little plate slowly rotates the part.

into your printer, and start printing, ***3***. Printing time depends on the size of the model or parts. Small objects may only take a couple of hours, whereas a car body might take upwards of 12 or 14 hours. You'll also have to properly position your parts for printing, ***4***.

So the part prints, what now?

After your parts are finally done, they're hanging, resin dripping off them. Use a plastic spatula to scrap the resin from the top of the plate and let it drip into the vat, ***5***. You can use that extra resin to make more parts — waste not, want not. Remove the plate and set it on a rag. Now, use a metal spatula to pop the parts off the plate. Thoroughly clean the plate and put it back on the printer, ***6***.

Place the parts in the wash station's basket and lower it into the cleaning solution. On my wash station, there is a magnet-operated fan blade at the bottom of the container that will turn on automatically when the lid is sealed and the timer activated. When the timer is finished, pull out the parts and place them on a clean cloth and switch the wash station to a curing station, ***7***.

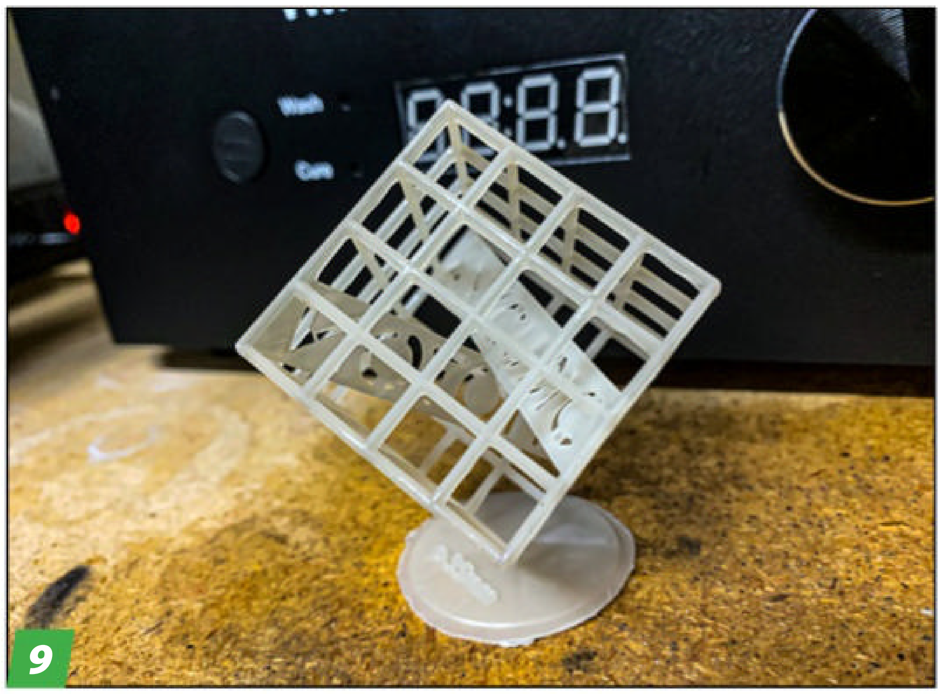
All that's left is to cure the parts. For my printer, I set aside the cleaning fluid and lock a plastic plate to the curing station. All the clean parts go on this plate and a cover goes over them. Just move the switch on the station from WASH to CURE and the bank of UV lights comes on. Set the timer for 4 minutes and let the lights do their thing, ***8***.

When the timer goes off, remove the parts and they're ready to go, ***9***.

3D printing is addictive!

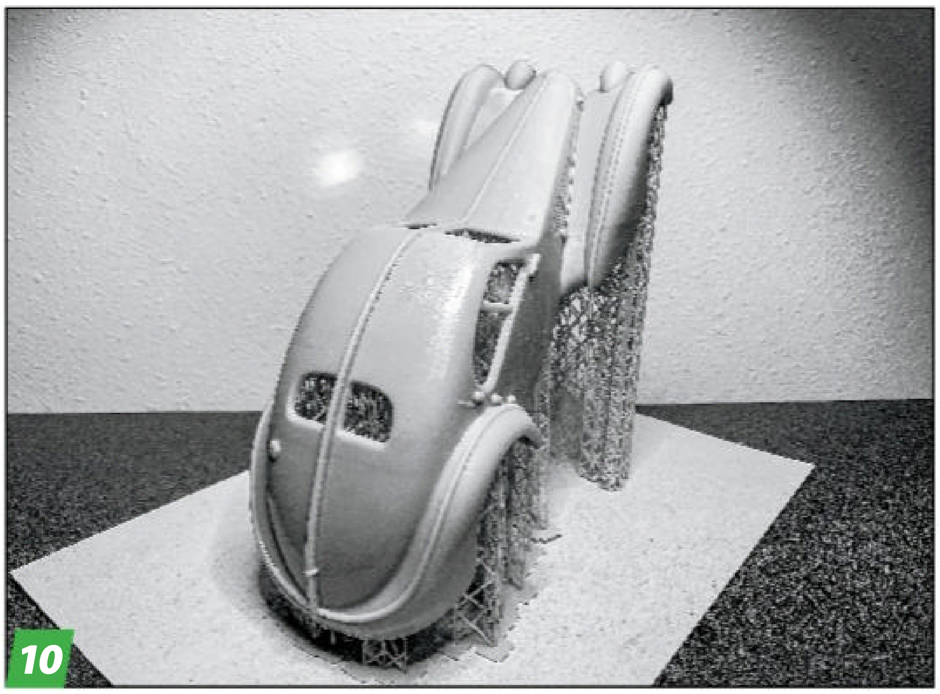
For the first couple of months, my 3D printer was printing 15 hours a day, six days a week. It allows you to print things that have never available in kit form, and soon I had more shoe boxes with 3D projects than manufacturer kit boxes in my stash, ***10***.

A deep breath and a dose of reality before we go. There is a substantial learning curve for 3D printing. You will have failed prints, but don't be discouraged. Learn from your mistakes. Find out why it failed and try again. There are numerous 3D-printing communities online that can help. Nine times out of 10, the guy that says the printer or program is garbage is the guy who doesn't have the patience to learn from his mistakes. Stick with it and you'll be rewarded with unique projects that no one else is building!



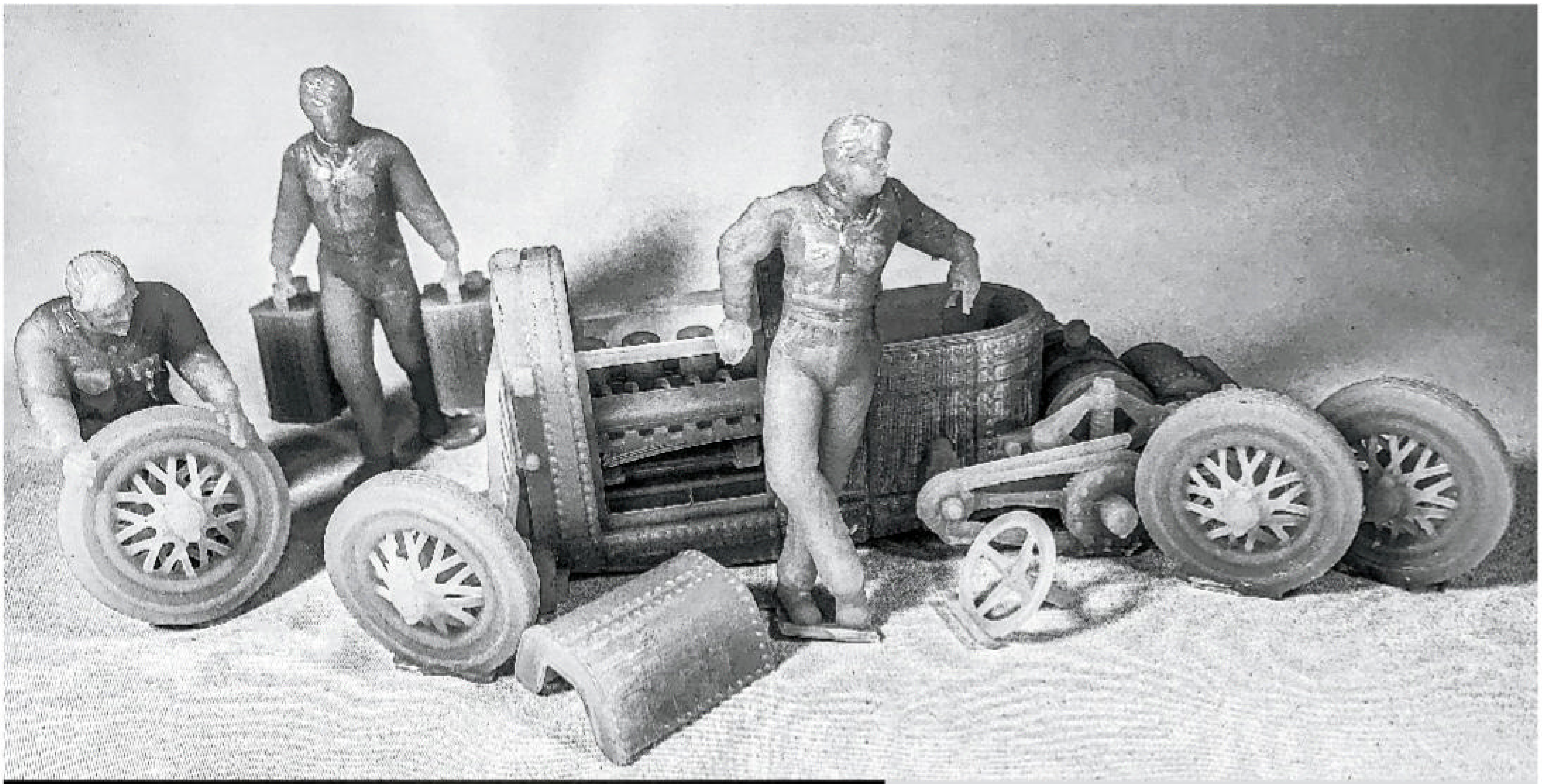
9

Look! A perfectly printed and cured 3D part! It is really cool to see something designed on a computer screen become an object in real-space. It's even better when you can put that object to use in a scale model that no one else has.



10

The shallow valleys on the side of the body were caused when the printer got to large open areas of the rear window and front windshield, and the printer still leaves rings on the body. Block sanding and primer will take care of both problems. Modeling basics still apply!



FINAL THOUGHTS

THESE WERE MY FIRST 3D PRINTS. I made mistakes and learned a lot from them. For instance, when printing cars, try to find files that offer front and rear window bucks to vacuum-form clear plastic for the glass, and learn how to best position parts for printing. Now, I'm making parts for models that no model manufacturer will touch because the sales risk is too great — no one will make a Morris Minor coupe in 1/23 scale, but I can! I've printed refrigerators with interiors; scale wrenches, hammers, saws, and practically any tool you can think of; and entire kits of cars designed by people with CAD chops who share a passion for models. You can't deny it, 3D printing is here to stay, and it's only going to get better. **FSM**

Positioning for 3D PRINTING

Minimize cleanup and build support

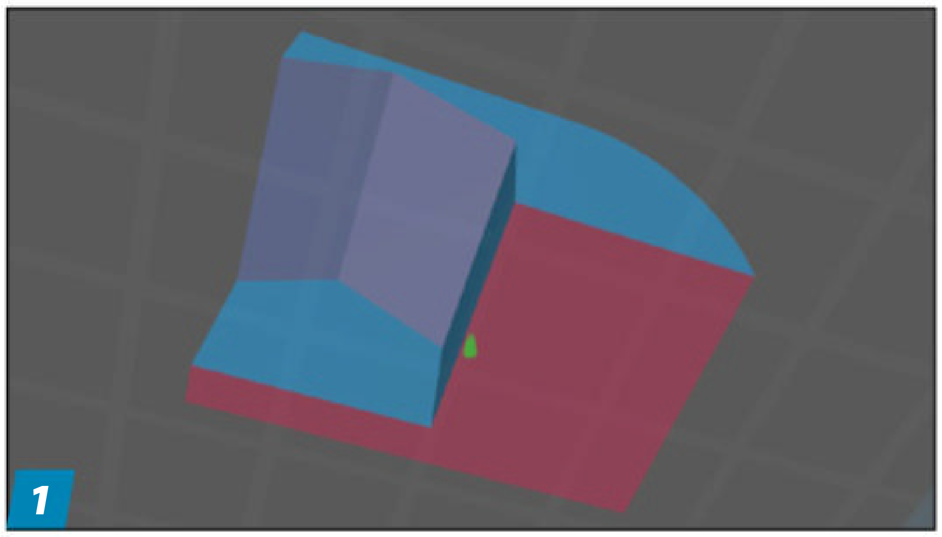
BY CHRIS CORTEZ

Printing parts, scale models, or miniatures is a rewarding way to expand on what you can build or how you detail a model. Unfortunately, it can also be frustrating with heavy layering and unfortunate supports leading to seemingly endless cleanup. In a decade of 3D printing both gaming miniatures and scale models, I have developed a few techniques and best practices.

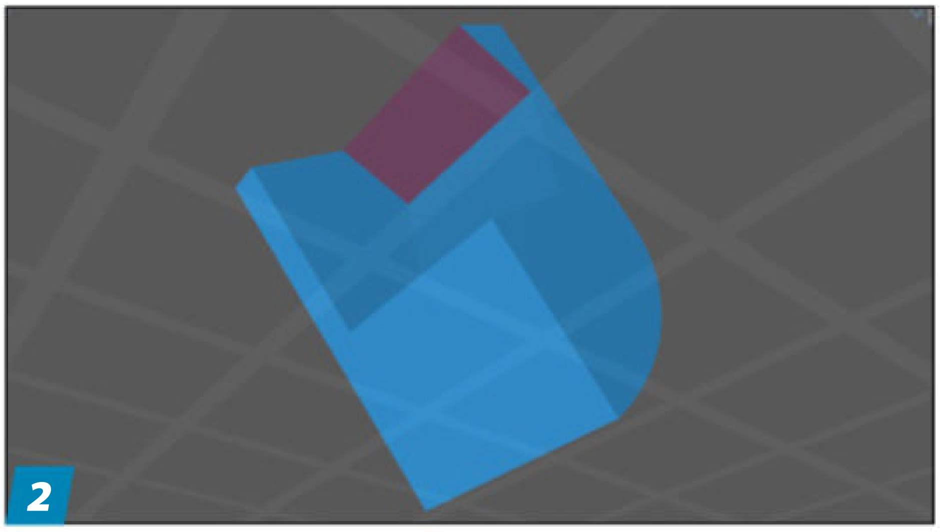
In the form of a check list, they would be:

☐ Raise the lowest point off the build plate 5mm.
☐ Optimize orientation to have the fewest number of islands, overhangs, and to hide the layer lines of the print.
☐ Add a raft to form a base to attach the model to the build plate.
☐ Anchor the lowest point of the model or part with a heavy support to take the weight of the model and to prevent it falling off the build plate.
☐ Support any islands — parts of the model not attached to the main model — when they start printing.
☐ Support overhanging parts or sections of the model.
☐ Add light supports throughout the model.
☐ Keep it simple.

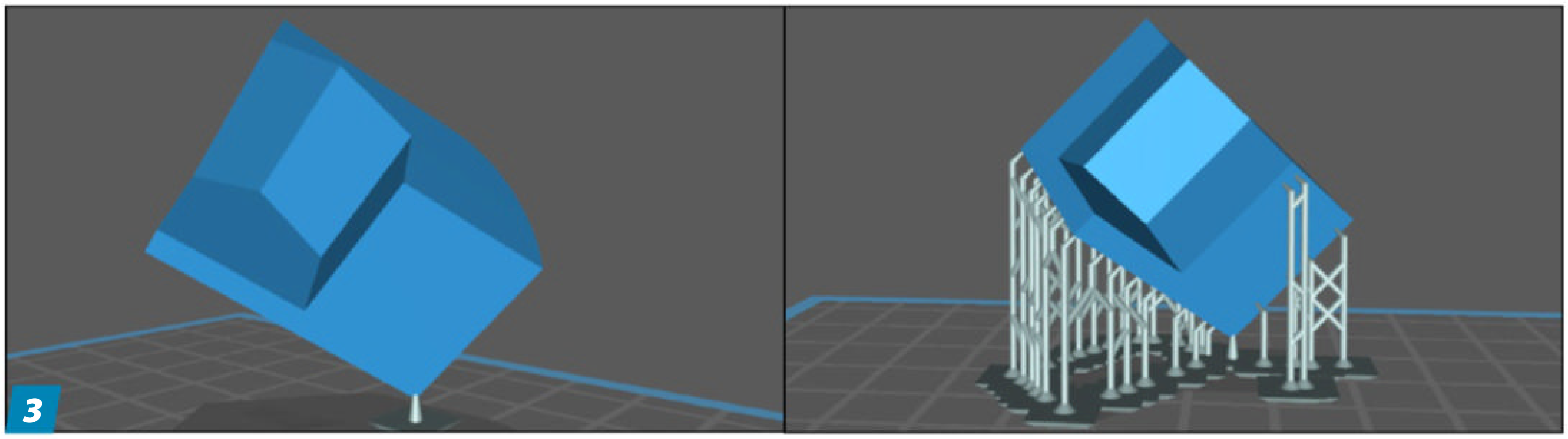
Whether you are designing your own parts in a CAD program or working with files purchased online, you'll need a slicer program to manipulate them for printing. The two most popular are Chitubox and Lychee. Both work with most printer brands and have nice features, so try both and find the one that suits your needs.



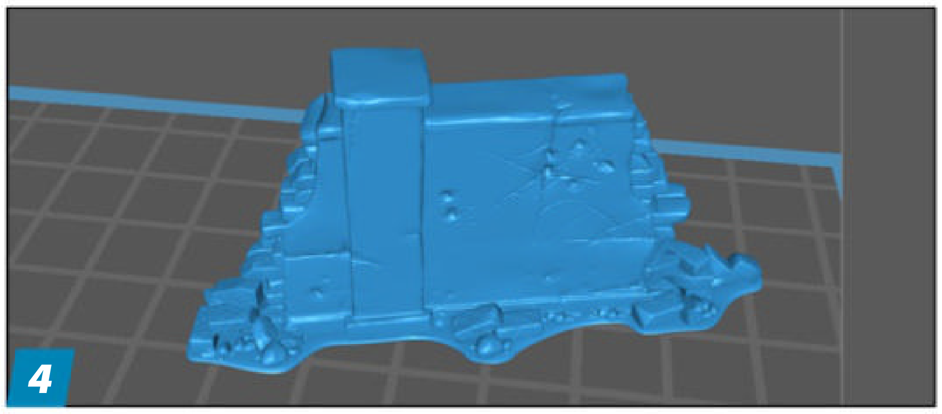
I designed a simple model to show the things to look for when setting up the model to be printed. Here it is sitting flat on one side and the red indicates this area of the model needs support. Most models will not be this simple, but the general ideas carry over to more complex prints.



Angling the model — the general rule is 45 degrees from the base or build plate — will make it easier to print and produce a cleaner part with less obvious layering. The bottom of the shape is now blue, but a section of the cutout is still red.



Rotating the model 45 degrees on the other axis makes the entire image appear blue. That indicates that the only supports you would need to print this model would be at the in the lowest corner with the rest of the model building off that location. Additional supports help brace the shape as it's printing but are not crucial, which gives you flexibility for those supports.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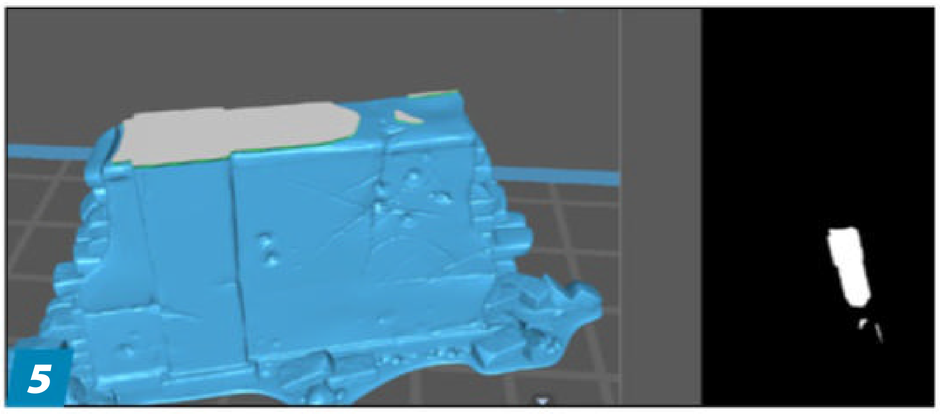
At first glance, it seems like the best way to print this wall would be flat on the build plate. The problem is that the top of the wall isn't perfectly flat so the surface of the cap stones will look like a topographic map.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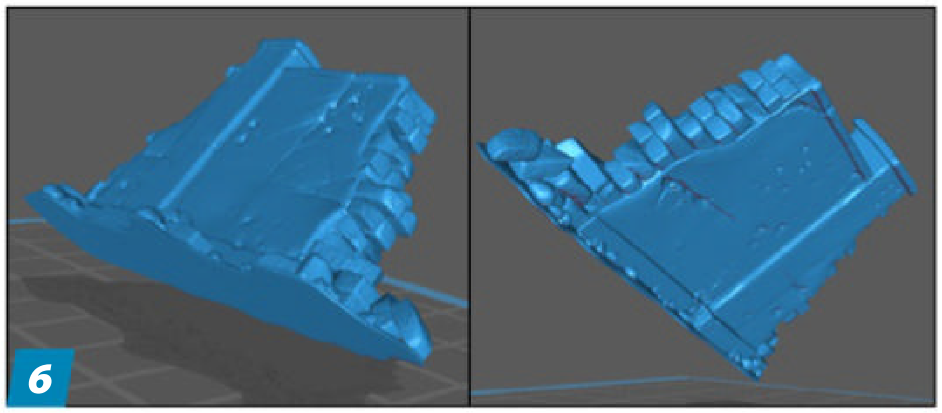
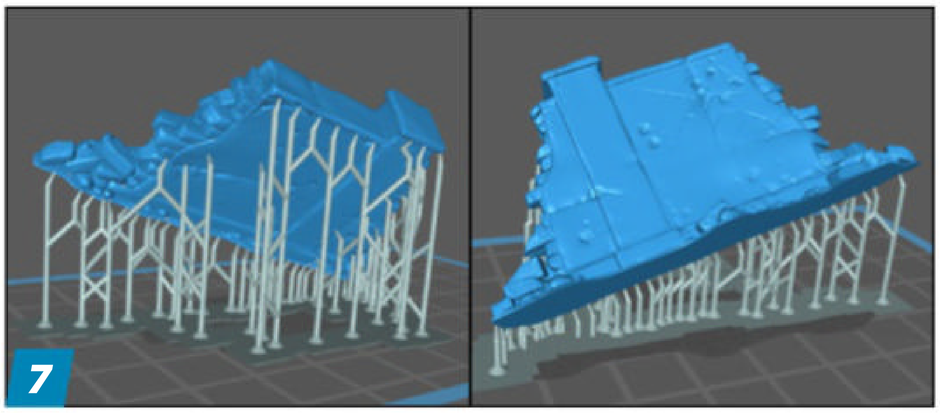
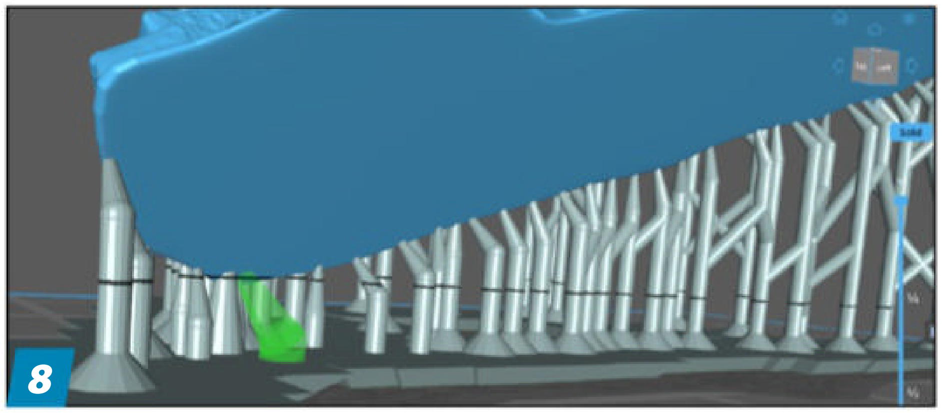
Here, I scrolled down through a few layers of the print file revealing that this layer has spots that will print on the surface producing a stepped appearance when printed. These layers are squared off.


6

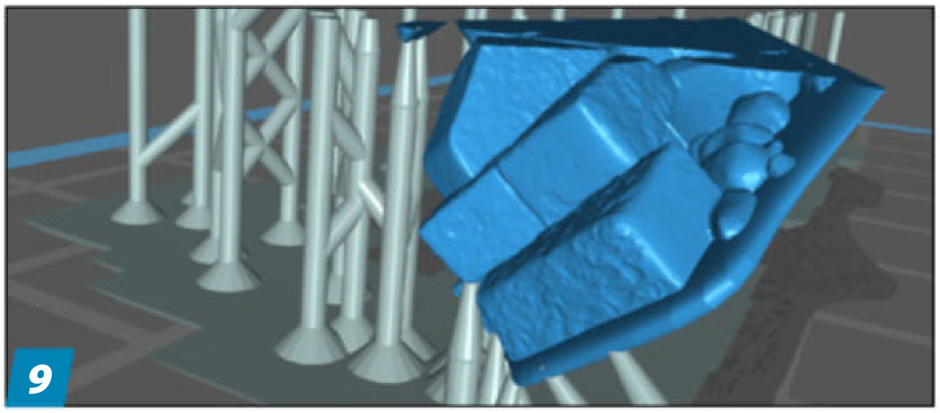
Tilting the model at a near 45-degree angle will hide those layer lines on the capstones. Twisting it 45 degrees on the other axis reduced overhangs and islands making it easier to print successfully.


7

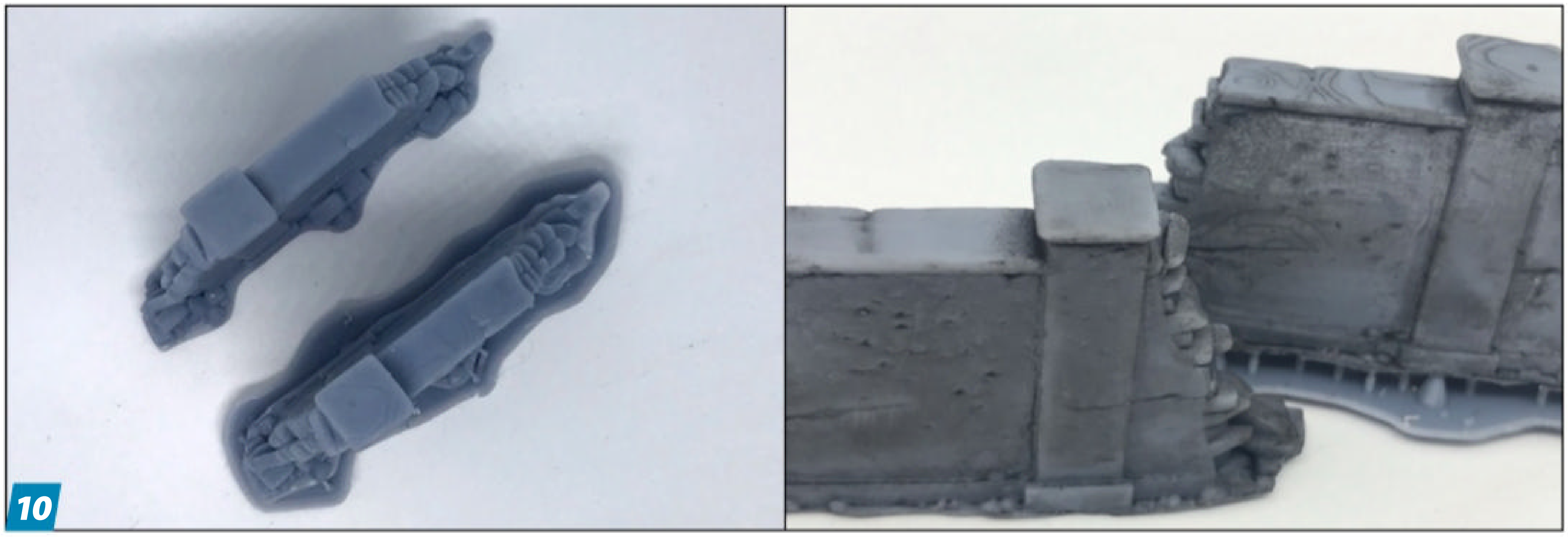
It is always a good idea to start with the slicer's auto-support feature set at light then add to it as needed. I add individual supports one at a time, usually heavy supports on the low edge to take the weight as it prints.


8

Then I add a raft where the supports will sit on the printer's build plate. Here, I placed the supports on the backside of the wall, making cleanup and elimination of those areas easier and less visible.


9

Working through the file layer by layer ensures that supports are provided for any islands that will start printing before they join the larger part. If they're not present already, you can add them now.

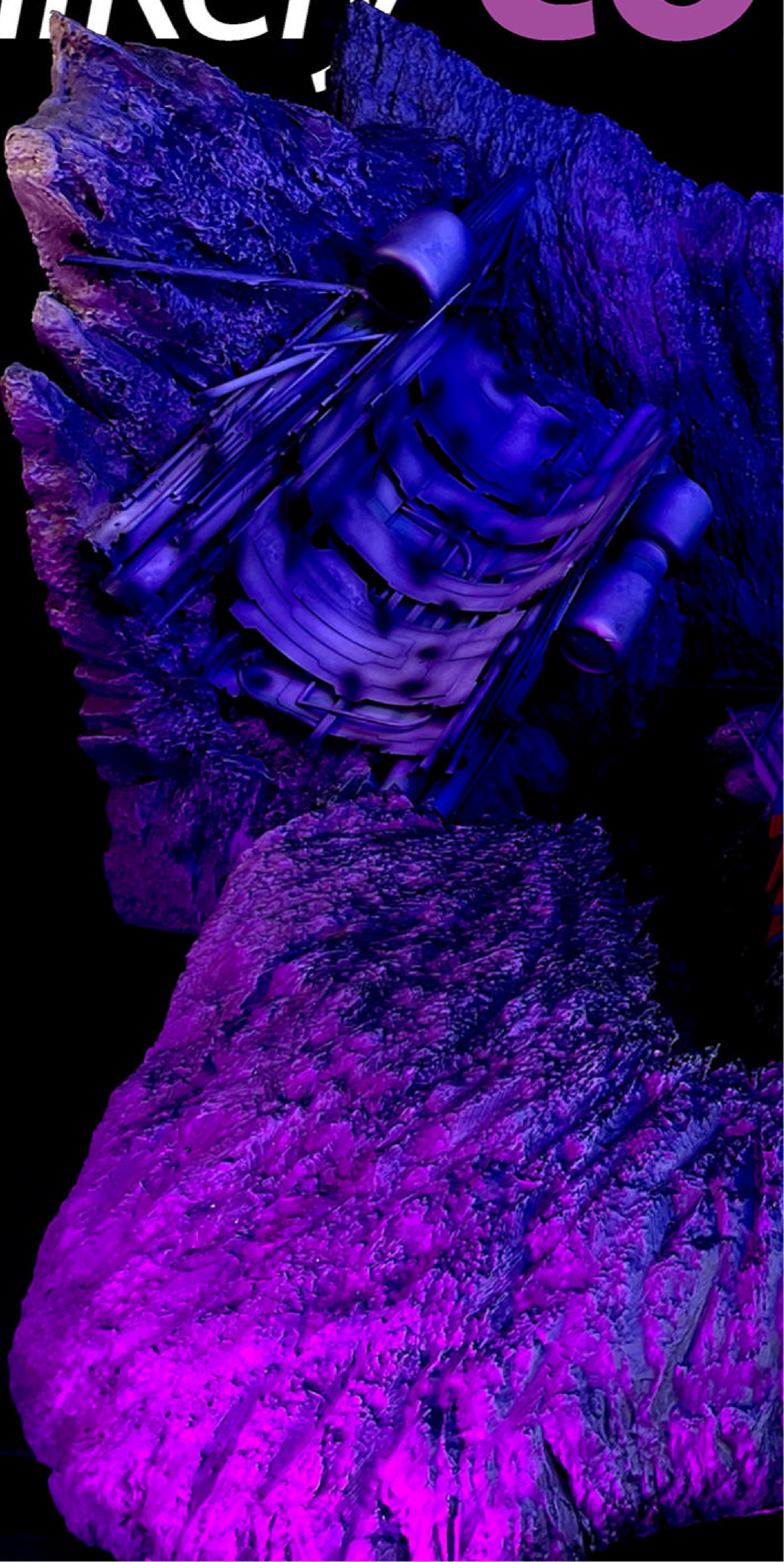

10

I printed two of the wall sections with the resolution set at .5mm layers, one flat on the build plate, the other angled and supported. This is thicker than I would normally print, but even thinner layer will show. A thin, black wash highlighted the stepping on the flat print. The angled model shows fine print lines on the sides, but those would be relatively easy to eliminate. Both models had the same height and printed in the same amount of time, but the angled model would need far less sanding and cleanup before use. **FSM**

An unlikely CO

What happens when a Gundam fan wants a 1/100 scale diorama for the trunk of her car?

BY NICO SURATOS

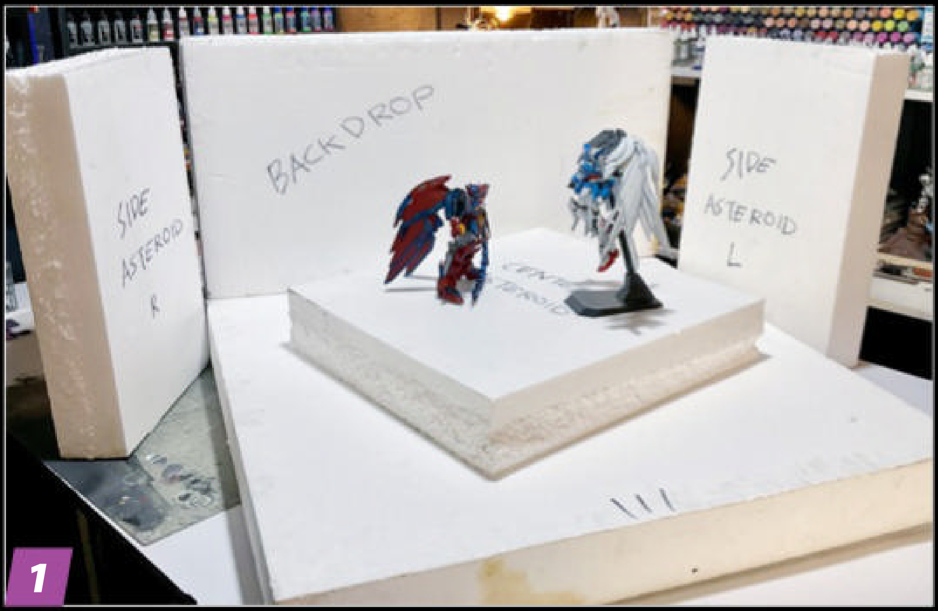


When Gundam fan Mai Lor contacted me to build her a diorama, I was a little shocked at the place she wanted to house it: the trunk of her 2008 Acura TL! It was going to be an extravagant display piece, and I wanted it to live up to her expectations. The scene I envisioned included Wing Gundam Zero battling Gundam Epyon in a space hangar built into an asteroid. The rivalry between these two well-known Gundams would be relatable to Gunpla modelers, even if they aren't caught up on the anime or deep into Gundam lore.

The models themselves became priority number one, and I settled on the Bandai 1/100 scale Master Grade Wing Gundam Zero (No. 129454) and Gundam Epyon (No. 170379) Endless Waltz kits. I kept the builds simple, cleaning up seams and went straight to painting with SMS colors and keeping true to the original anime appearance. Gloss coat, decals, flat coat, and they were done.

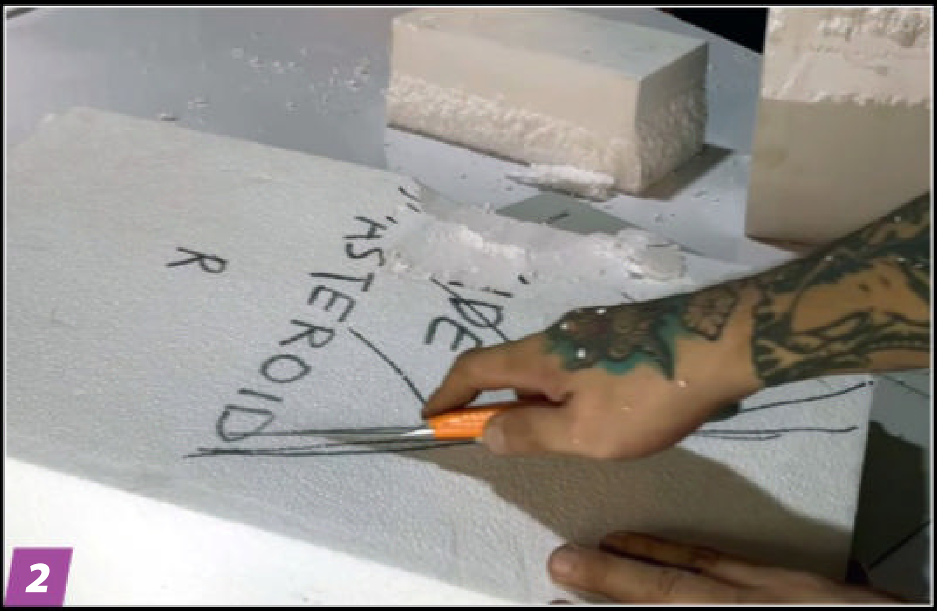
At that point, my focus was on the diorama design. I presented Mai with a sketch, she gave me the go-ahead, and it was time to start building the largest project of my life!

MMISSION



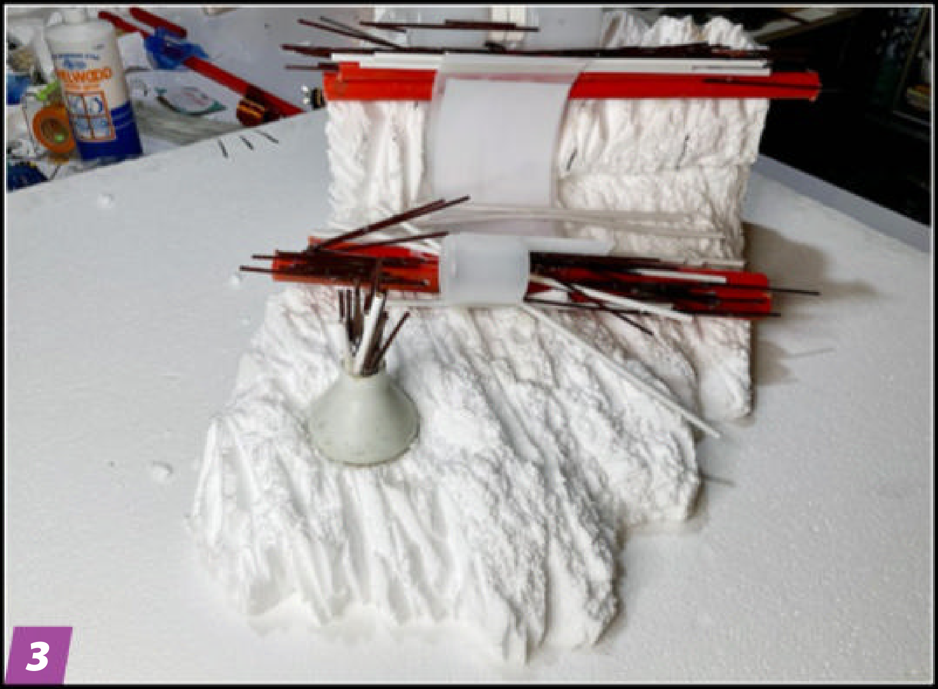
1

To keep costs and weight down, I opted for expanded polystyrene (EPS) sheet for the base. I mocked up the base, keeping it smaller than the trunk interior, with overall dimensions roughly 37 inches deep, 38 inches wide, and 17 inches tall.



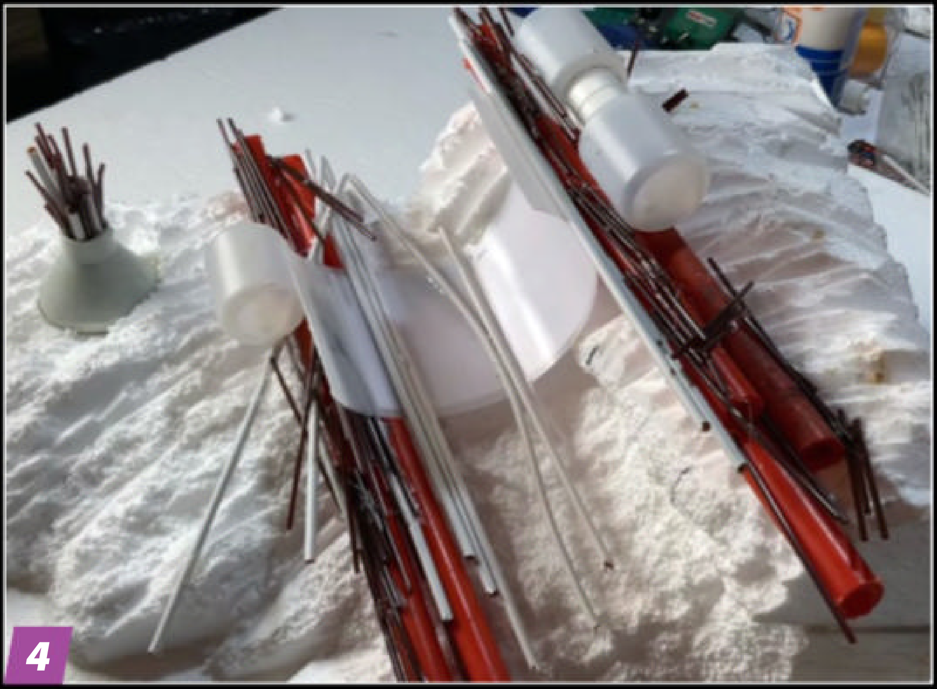
2

Living in a family of scale modelers has its perks! I enlisted the help of my dad and siblings to carve the EPS with knives to get the rough shapes for the diorama's base, back, and sides. This is messy work, so be prepared to clean up a lot of scrap.



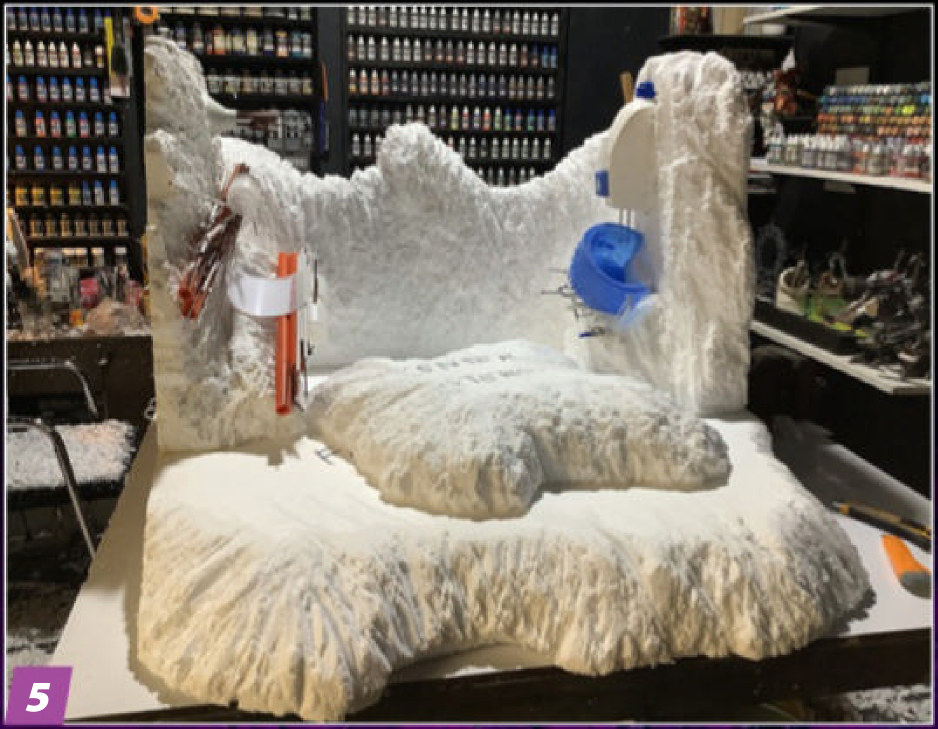
3

After the EPS foam at least resembled rock, it was time to model exposed conduit, damaged installations, and a platform where the mechs were fighting. I turned to recycled plastic like balloon sticks, empty containers, and lids to keep cost down.



4

The problem when working with recycled plastic rather than styrene tubes and sheet is gluing them together. Thin plastic cement would not work and superglue would stick to some materials and not others. The best solution was a hot-glue gun.

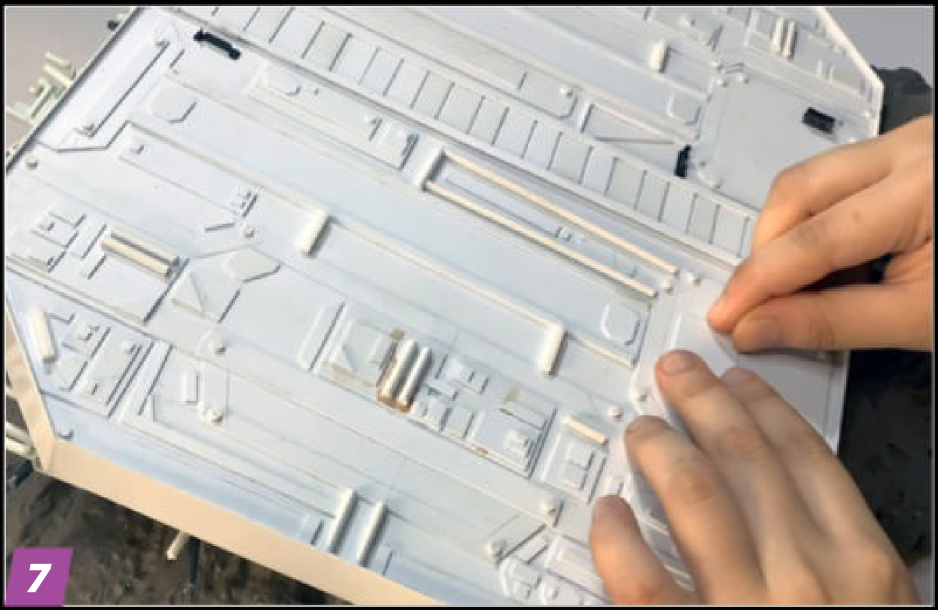


5

At this point, I needed to mock-up the scene to see if it was all working together. While it was coming together, I'd need plenty of styrene sheet and other shapes for more intricate parts, particularly the central platform.

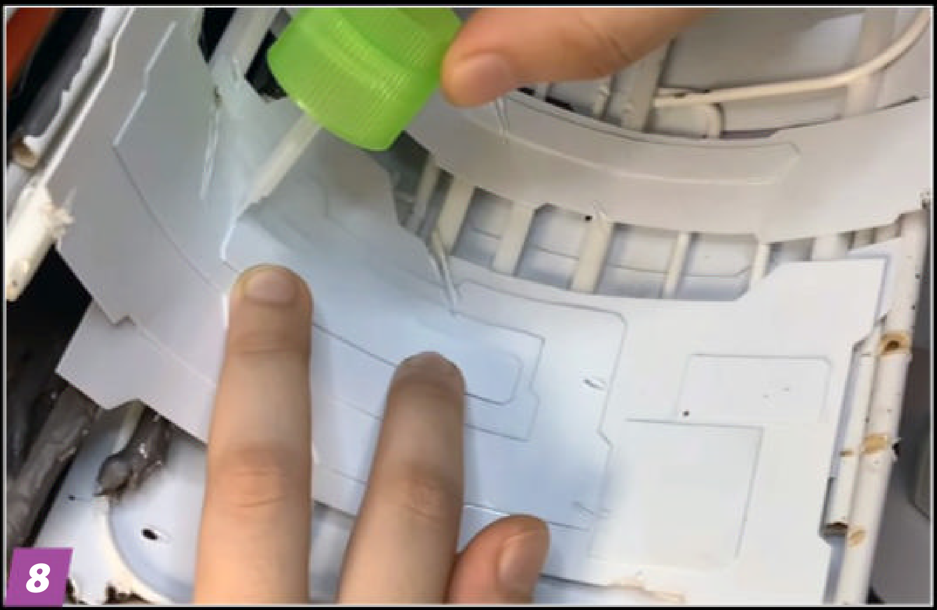
6

I cut the basic shape for the platform out of .8mm styrene sheet, glued it to a ½-inch thick section of EPS foam, and then covered the sides with more styrene sheet. This gave the platform thickness and the illusion of mass.



7

The platform needed interesting, sci-fi texture. I sketched basic shapes on the main platform then went to work cutting styrene sheet into various shapes and glued them in place, along with styrene tubing and rod.

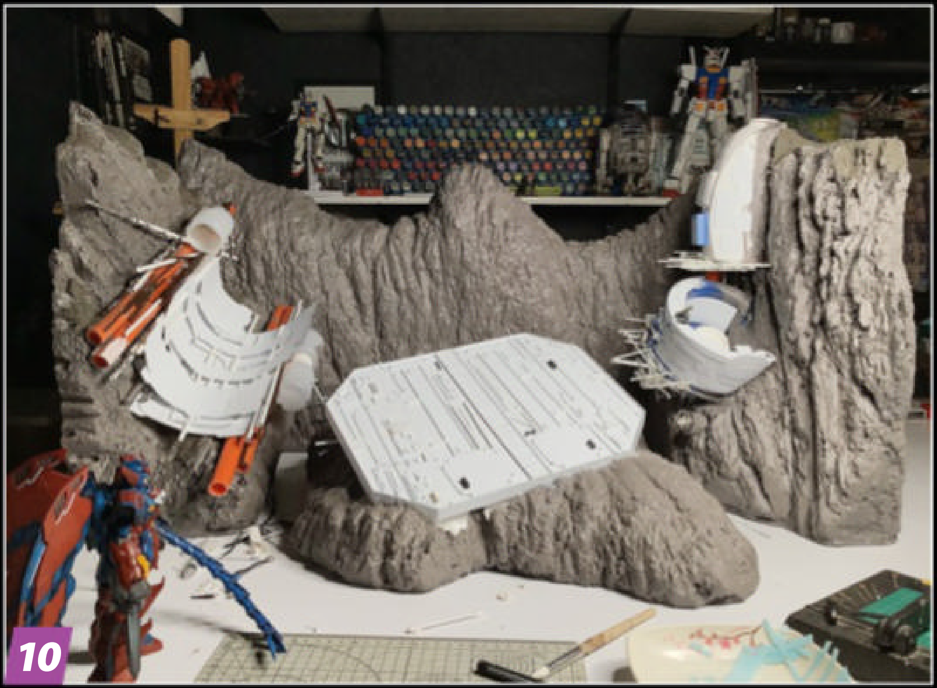


8

Styrene sheet, tubing, and rod helped build up the details on the sides of the asteroid made with the recycled plastic parts. Adding regular geometric shapes gave the impression of engineering rather than a jumble of refuse. The battle damage was made with a soldering iron.

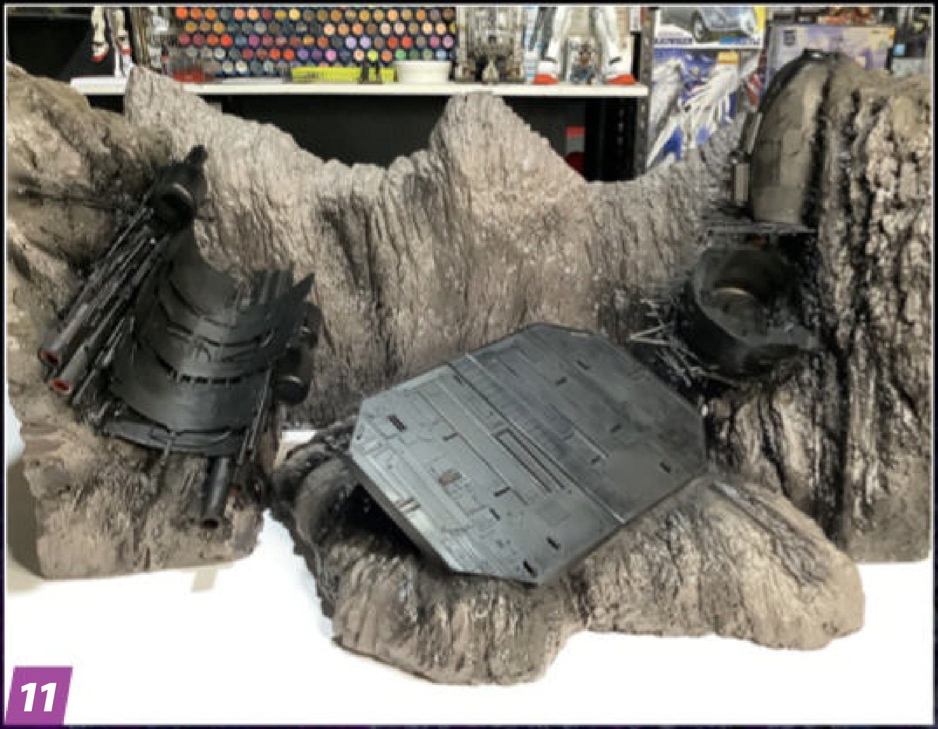
9

To cover this diorama in hobby-grade texture paint would have cost a fortune, and sand and glue would add weight. Instead, I turned to white textured paint from the hardware store and brushed it on all of the exposed EPS. It dried to a consistency similar to Vallejo textured paints.



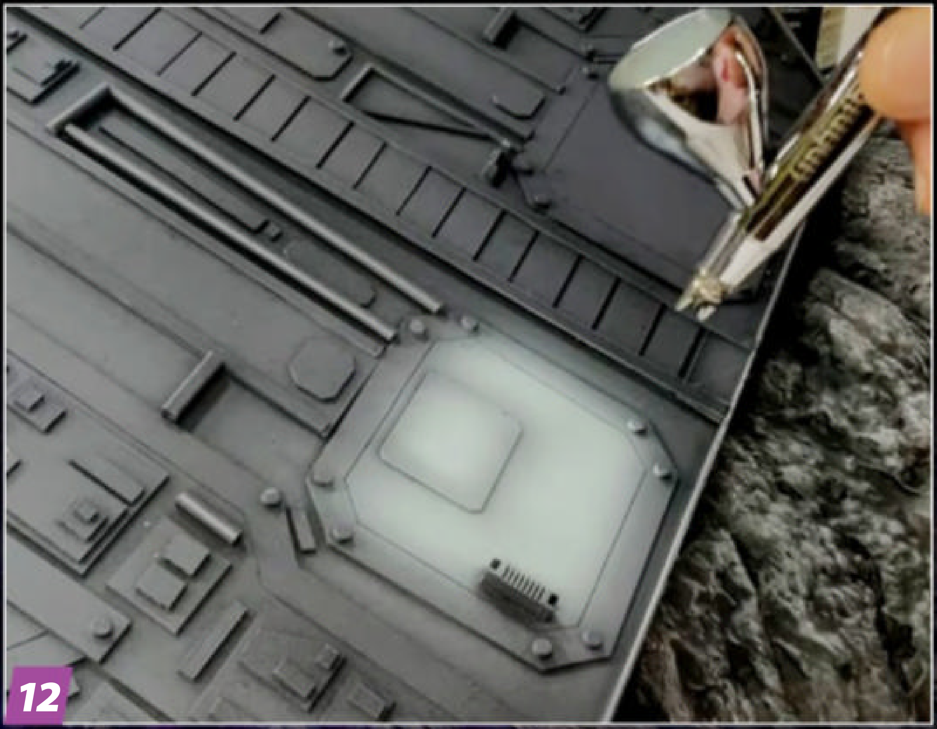
10

After the textured paint dried overnight, I brush-painted it with household paint that was close in color to Vallejo London Grey (No. 70.836). I made sure to avoid the hangar parts because the thick paint would have obscured details.



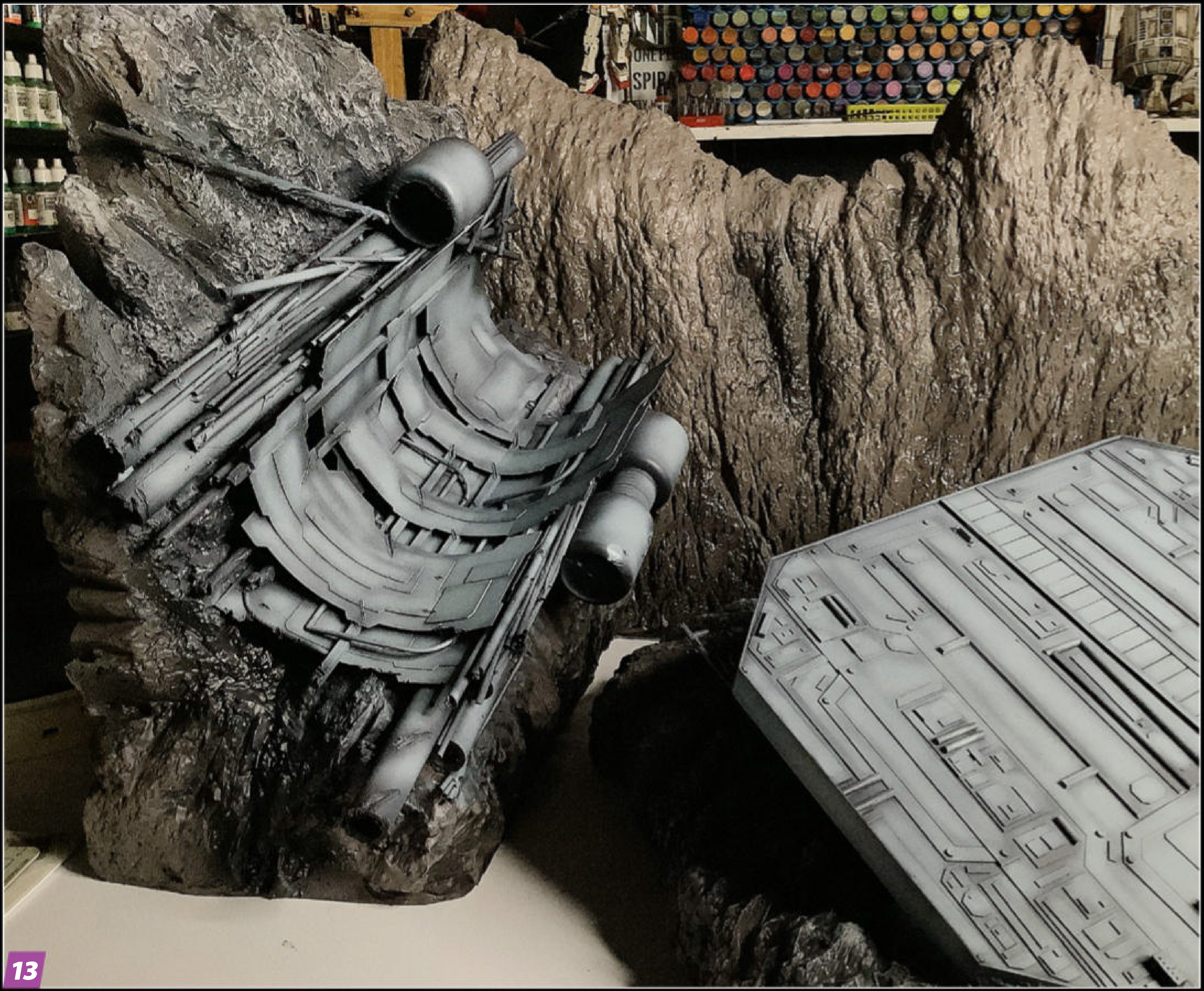
11

Now, with the overall color established, I airbrushed the platform and exposed hangar machinery Vallejo Mecha Primer Black (No. 74.642), making sure to cover every inch as well as the nooks and crannies in case I missed them later — it would look like shadows.



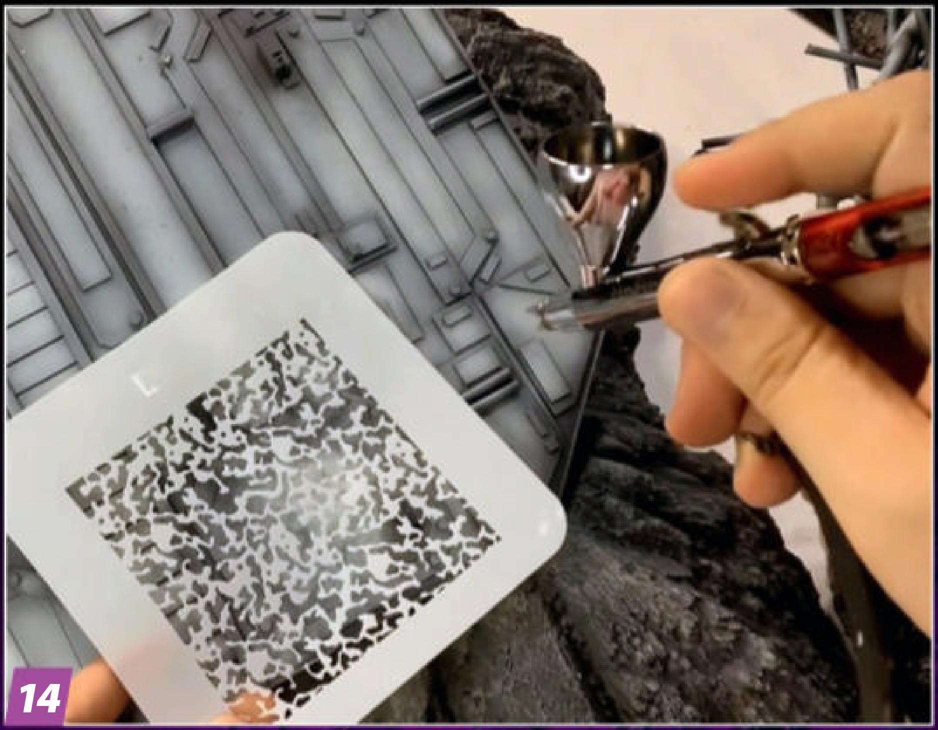
12

I dry-brushed the asteroid Vallejo Stone Grey (No. 70.884) to add depth and bring out the texture. The hangar parts and platform received a Mecha Color Dark Grey Green (No. 69.041) base coat before I post-shaded with Game Air Stonewall Grey (No. 72.749).



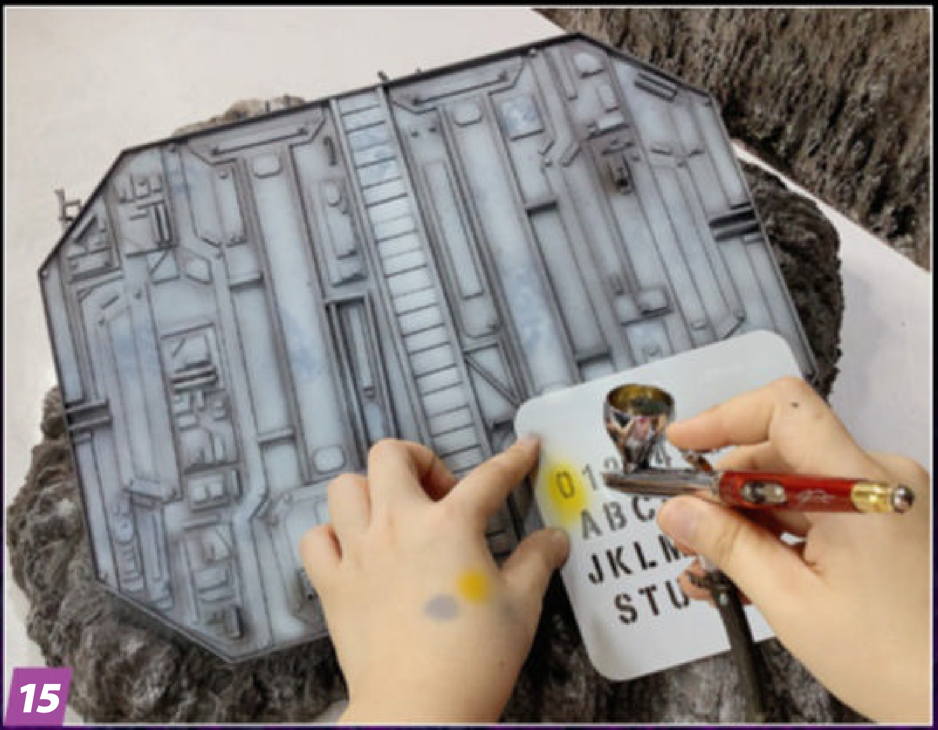
13

With all the dry-brushing and post-shading done, I felt that the diorama lacked dirt and damage. Mixing Vallejo Game Ink Black (No. 72.094) and a bit of Vallejo Thinner (No. 71.361), I airbrushed burn marks on the hangar construction.



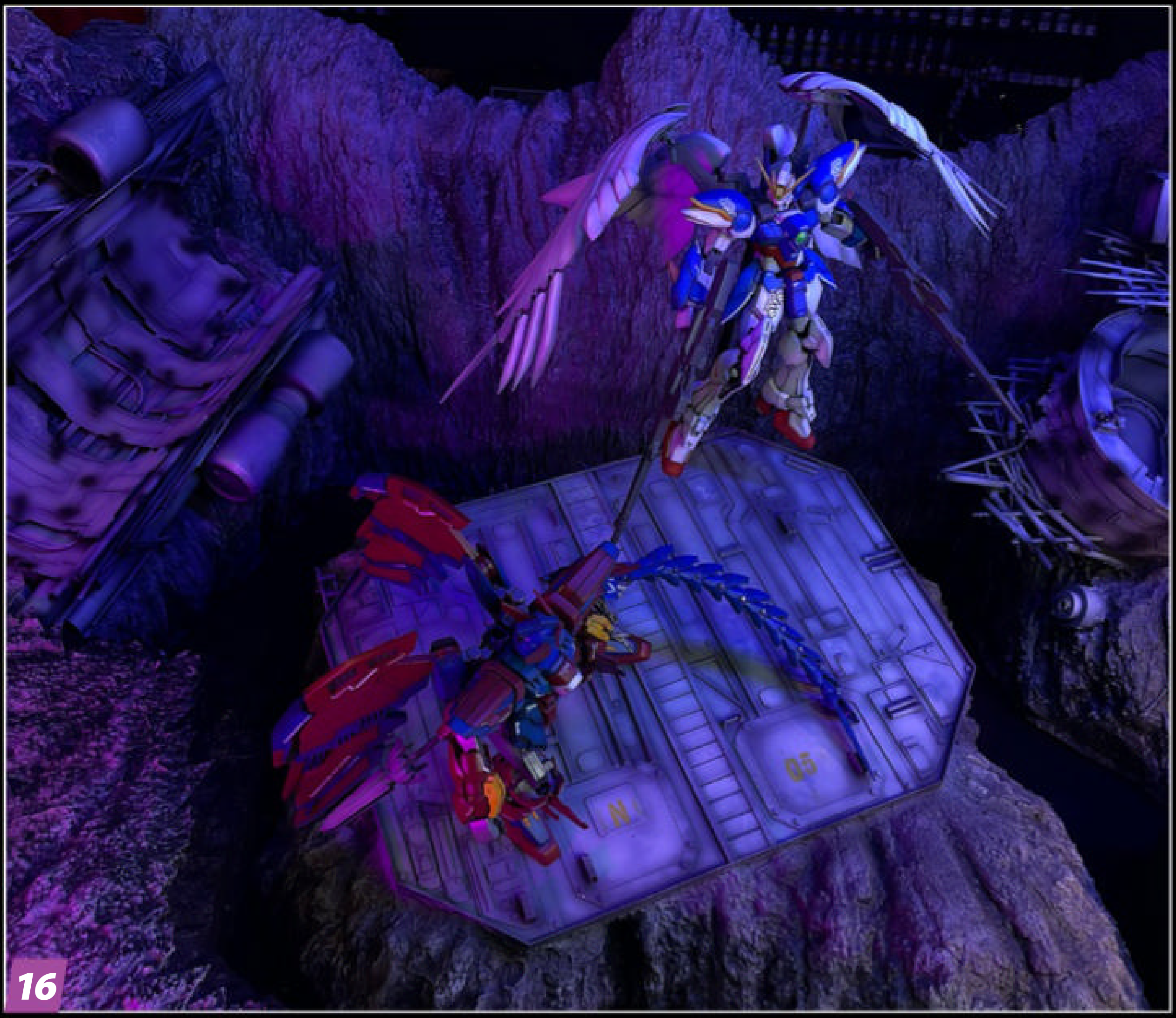
14

Vallejo Weathered Paint Hobby Stencils (nos. ST-AIR001 and ST-AIR002) made quick work of lightly worn effects. I thinned Vallejo Game Ink Blue (No. 72.088) and airbrushed it though the stencils to create subtle, weathered areas.



15

Hangar decks often have numbers, and I thought it would be cool to leave a signature on my work. With Vallejo Game Color Ink Yellow (No. 72.085) and another Vallejo stencil (No. ST-LET002), I airbrushed an N (my first initial) in one spot and 05 (my birthday) in another.



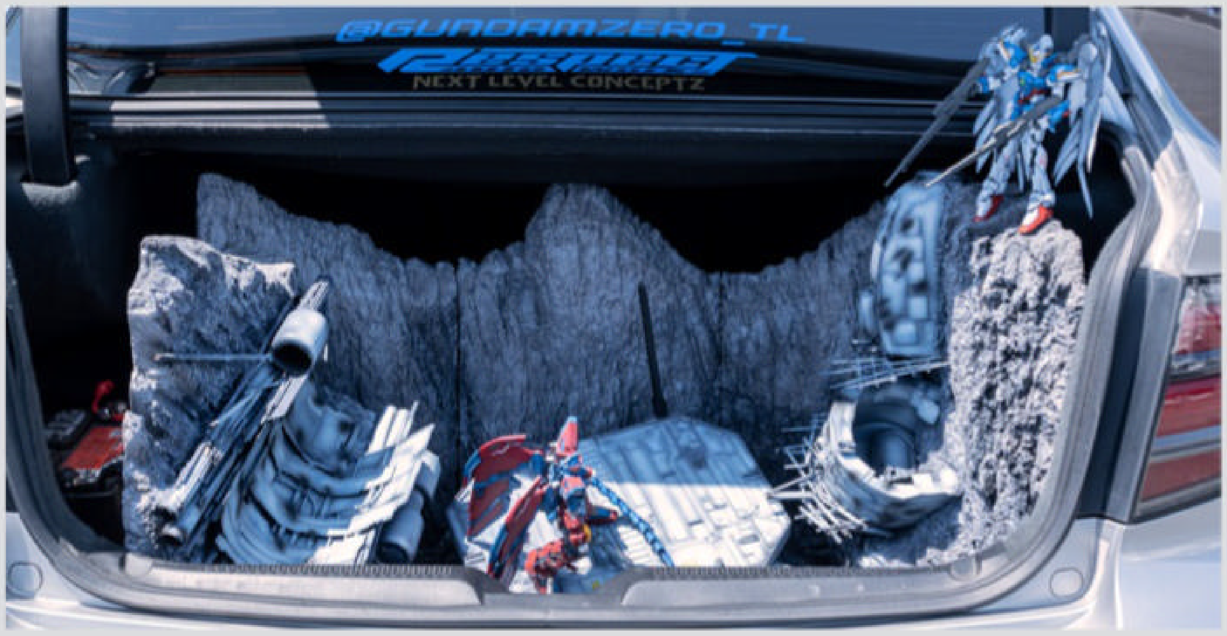
For a more dynamic encounter, I modified the Wing Gundam Zero kit's stand, and attached it to the base so the model appeared to hover. I glued the Gundam Epyon's feet to the platform since the rest of the figure could be detached at the ankle. I called it done!

FINAL THOUGHTS

MY FIRST COMMISSION for 2022 and the biggest diorama I've worked on is officially finished. It took me a month to complete: one week each Gundam and two weeks for the diorama. And I did have help along the way. The size of the project was certainly a challenge, but so too was keeping costs and weight down — I did have to ship it from the Philippines to the mainland U.S. My client, Mai Lor, was so kind and loved it!

Me? I'm completely satisfied with this project, and I would love to make a similar diorama, but something smaller, I think! **FSM**

Meet the Gundam TL



GUNDAM
WING
ZERO
XXXG-00W0
ACURA

Photos/Vivien Fermil

WE SEE INTERESTING MIXES OF FANDOMS ALL THE TIME, but this is a first: a scale model diorama made for a car.

Mai Lor, 34, of Modesto, California, commissioned Nico Suratos to build a Gundam diorama to fit into the trunk of her tuned and boosted 2008 Acura TL.

"I grew up watching [Cartoon Network] Toonami and was always a fan of Gundam," Mai says. She's also been into car culture since she was a kid, and five years ago, she picked up her TL and the Gundam theme was a no-brainer given her fandom for the show.

While swiping through Instagram, Mai went down a rabbit hole that brought her to Nico's work, and she was blown away. Mai had only a vague idea of what she wanted to go in the trunk, but thought she'd take a chance and see what Nico could do.

After an initial discussion, Mai says she gave Nico, who lives in the Philippines the freedom to do what she wanted.

"Her build is amazing," Mai says.

Mai's not done. She plans to put a star field background complete with lights to disguise in the trunk interior and show the Gundam battle happens in space.

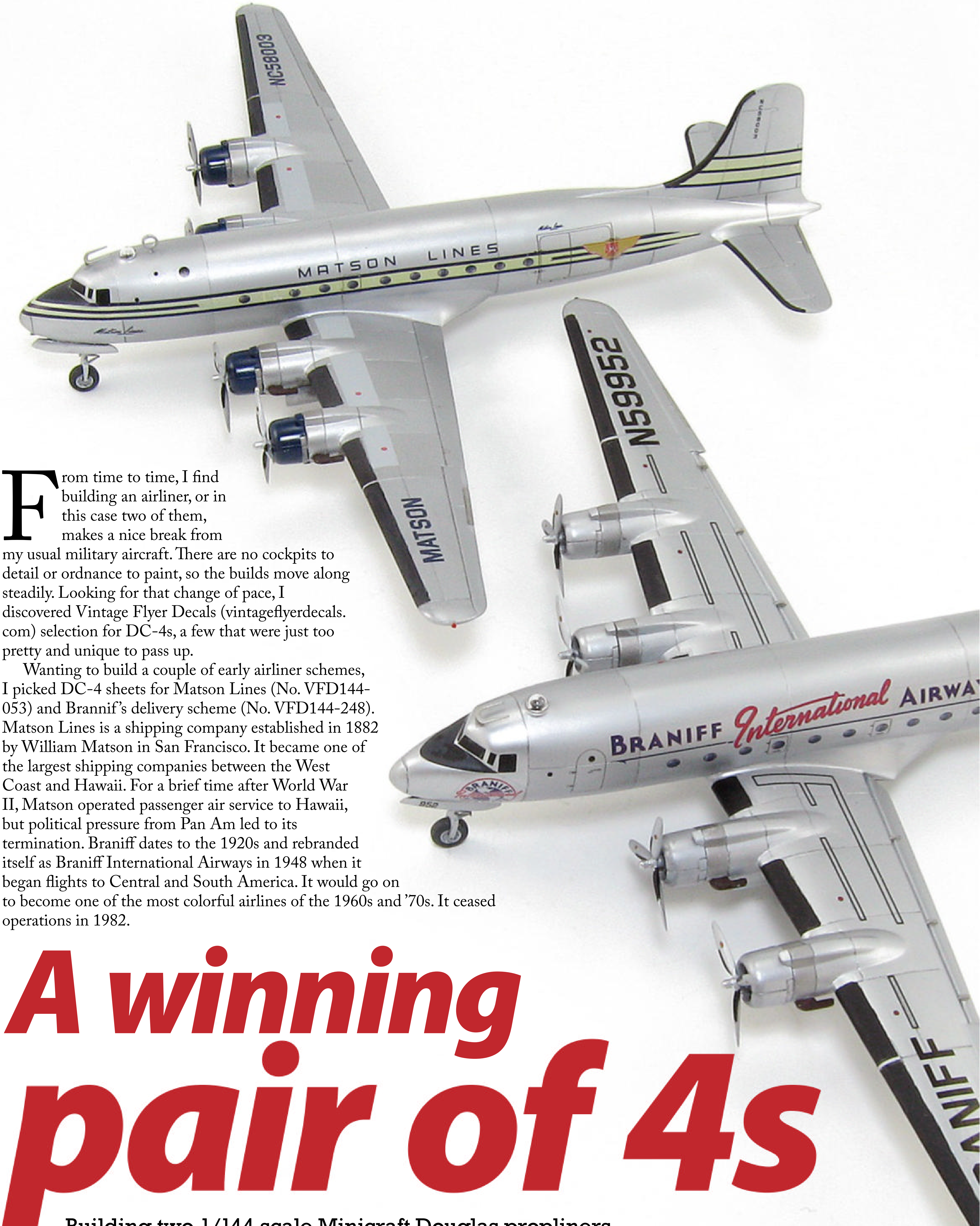
When asked about the reactions she gets to the Gundam TL, Mai shows a streak of rebellion car culture is known for.

"I did it for me," she says. — *Tim Kidwell*

A winning pair of 4s

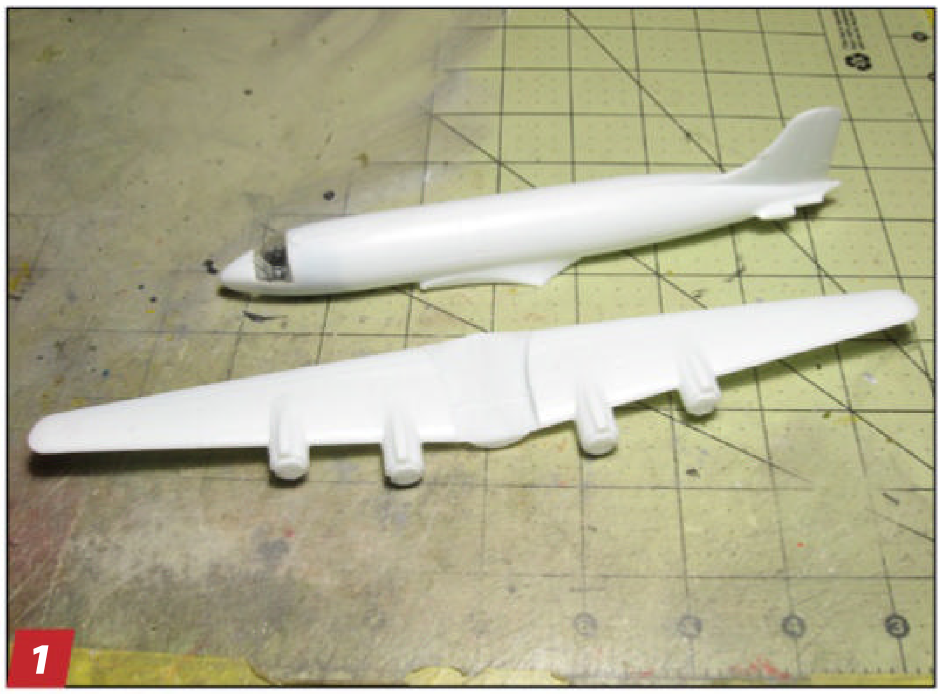
Building two 1/144 scale Minicraft Douglas propliners

BY FRANK CUDEN

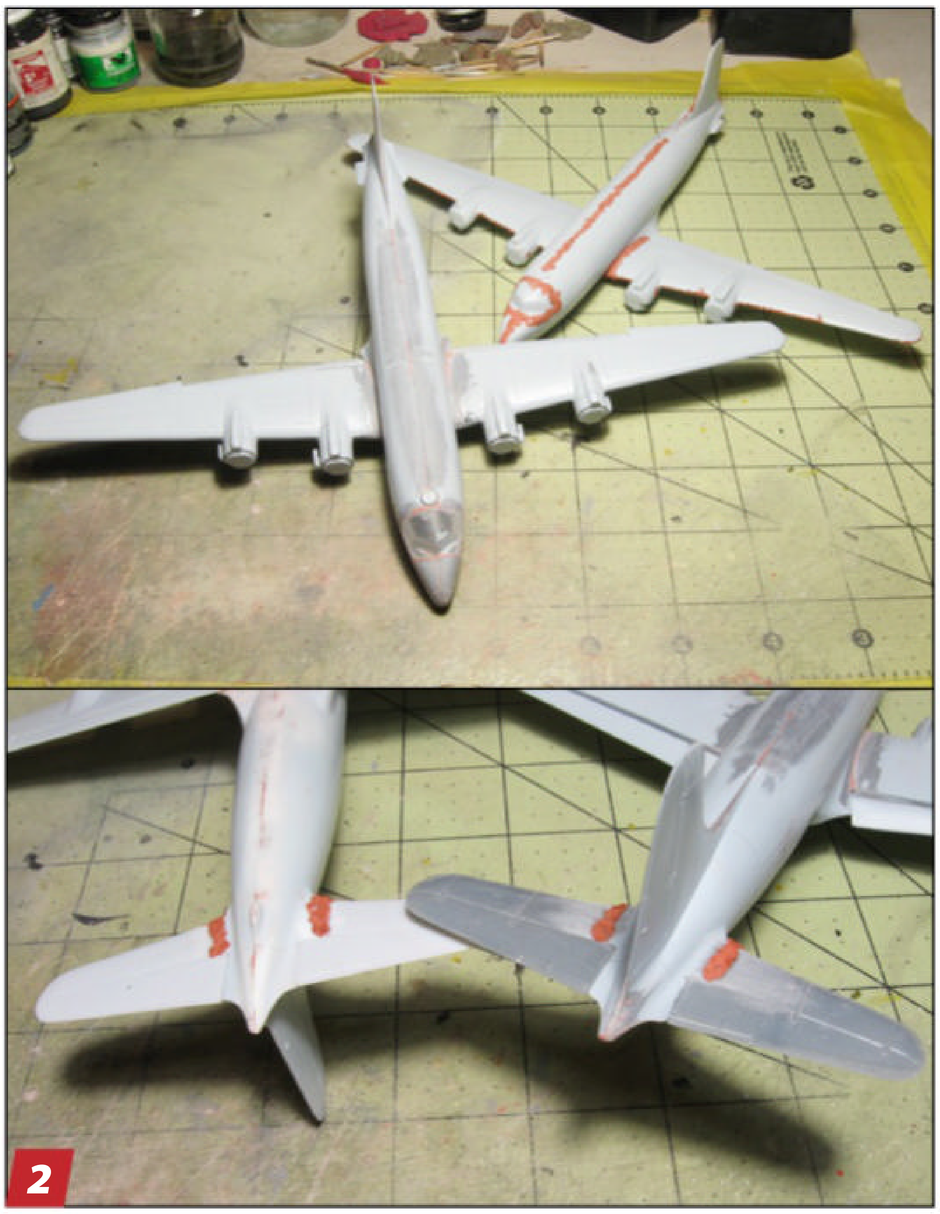


From time to time, I find building an airliner, or in this case two of them, makes a nice break from my usual military aircraft. There are no cockpits to detail or ordnance to paint, so the builds move along steadily. Looking for that change of pace, I discovered Vintage Flyer Decals (vintageflyerdecals.com) selection for DC-4s, a few that were just too pretty and unique to pass up.

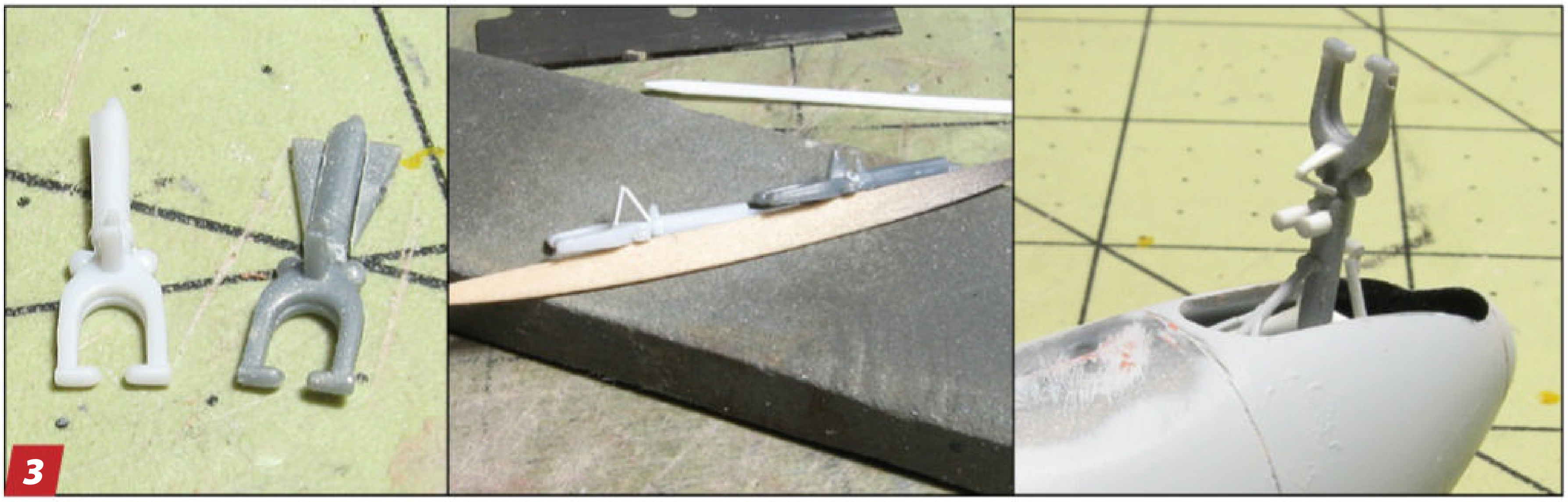
Wanting to build a couple of early airliner schemes, I picked DC-4 sheets for Matson Lines (No. VFD144-053) and Brannif's delivery scheme (No. VFD144-248). Matson Lines is a shipping company established in 1882 by William Matson in San Francisco. It became one of the largest shipping companies between the West Coast and Hawaii. For a brief time after World War II, Matson operated passenger air service to Hawaii, but political pressure from Pan Am led to its termination. Braniff dates to the 1920s and rebranded itself as Braniff International Airways in 1948 when it began flights to Central and South America. It would go on to become one of the most colorful airlines of the 1960s and '70s. It ceased operations in 1982.



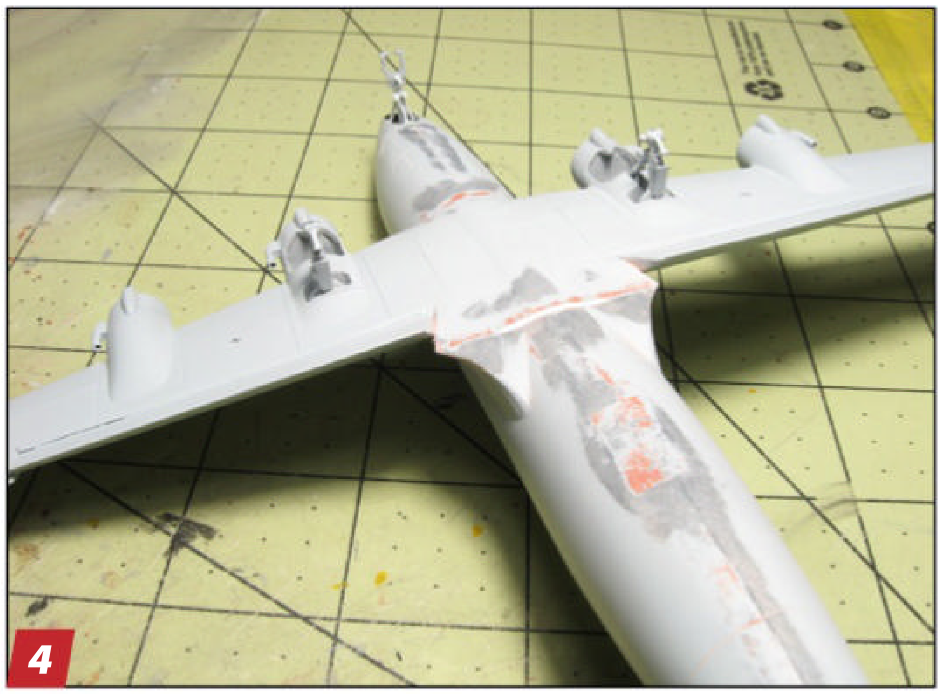
After removing and cleaning up the basic airframe parts, I glued the fuselage halves and the three-piece wings together.



I planned to use decals for the cockpit windows, so I glued the clear parts onto the models and blended them into the fuselage with Bondo Glazing & Spot Putty, which I also used to fill seams. After sanding joins and spraying both models with Alclad II Grey Primer and Micro Filler (No. ALC-302) to check my work, I added more Bondo as needed especially around the tailplanes. Before adding the exhausts, I drilled the ends for realism.

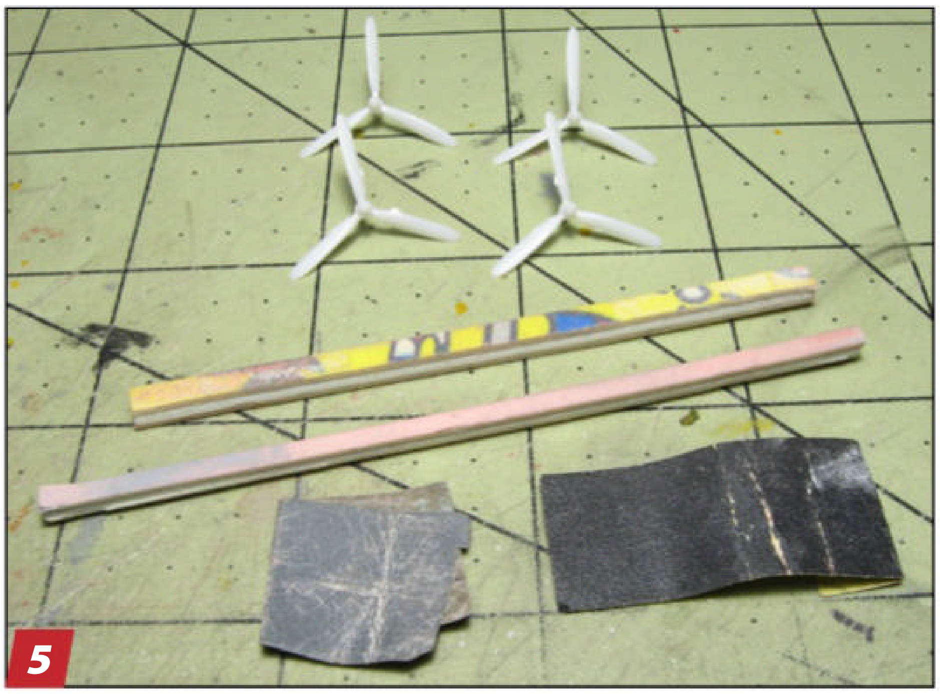


The kit simplified nose gear legs were not well defined, with the retraction and support struts as well as the oleo scissors represented by solid triangular plastic sections. I sawed them off and replaced the scissors with thin styrene strip; fine styrene rod produced realistic struts. Holes drilled into the outer sides of the yokes represent tow-bar attachments.



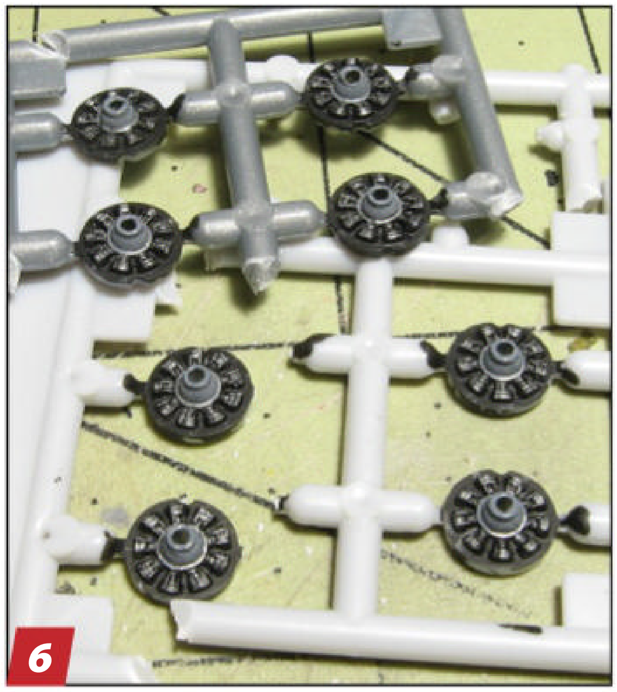
4

With the nose gear legs detailed and attached, I glued the main gear into the bays. Note, I cut out and dropped the flaps on the Braniff airframe to add interest to the model and set it apart from the other.



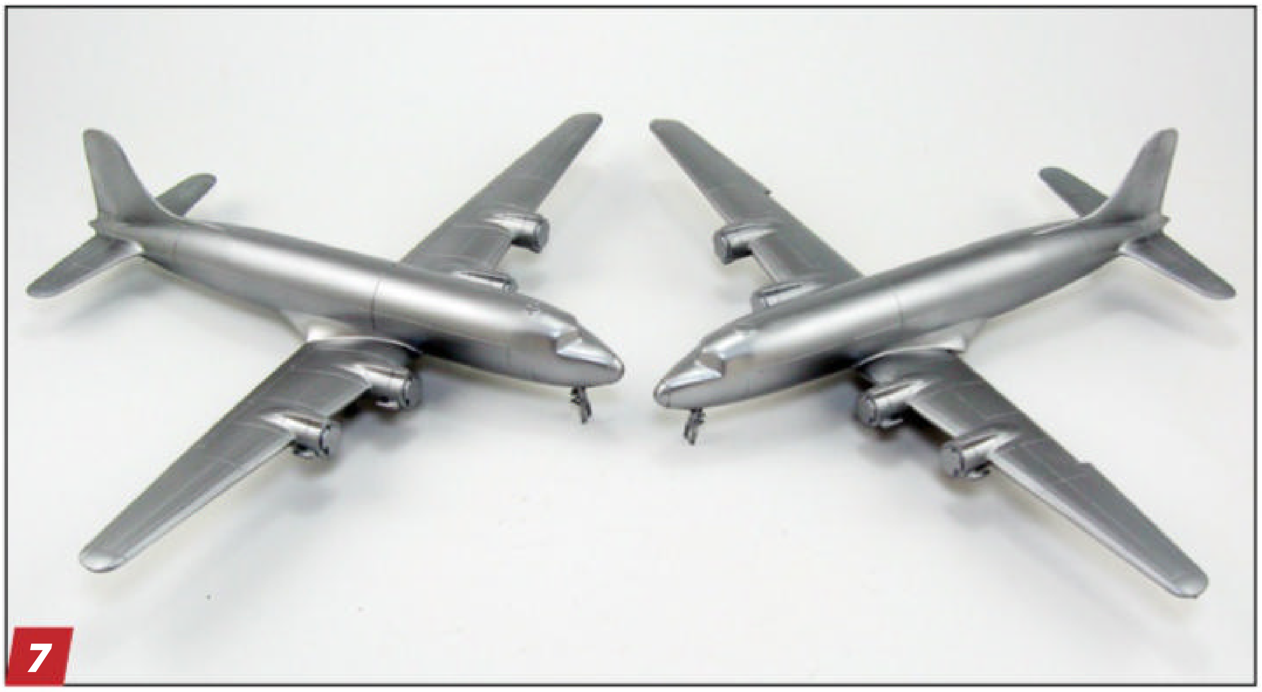
5

To refine the small, fragile propellers, I carefully thinned the blades with sanding twigs and fine sandpaper. I paid special attention to the ends because molding limitations rarely produce scale thin tips.



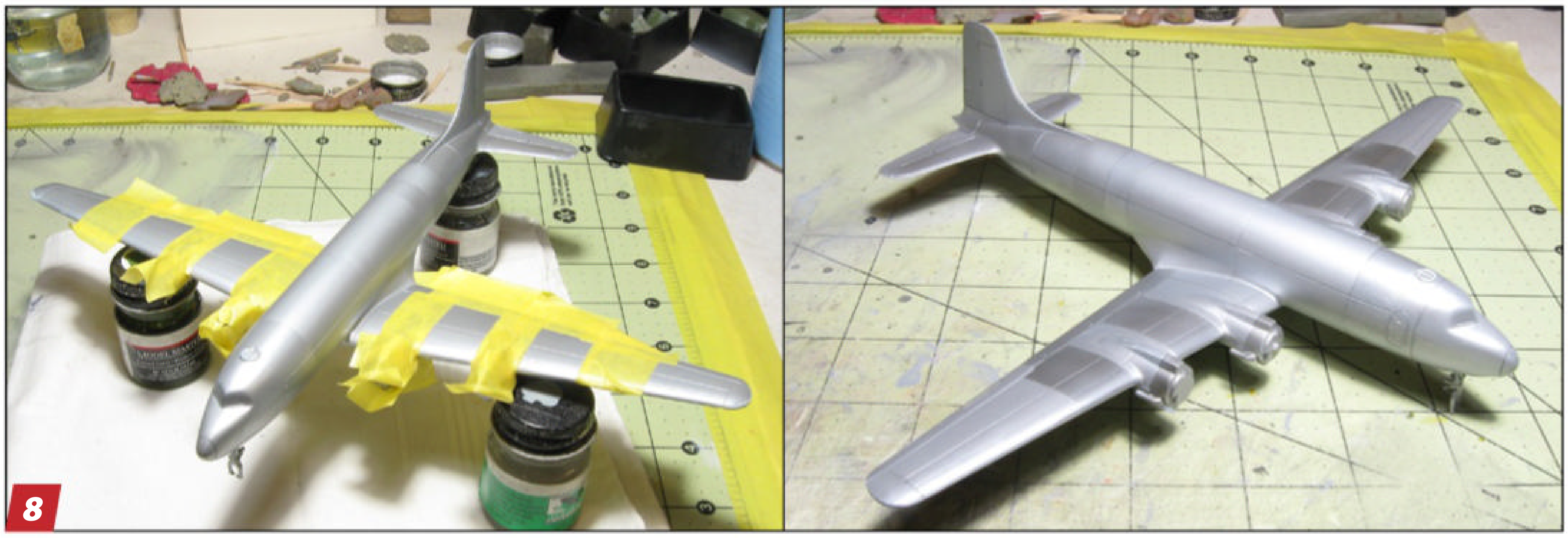
6

I detail-painted the engine fronts, but I did not add ignition wires. Not only are the parts small, the close-fitting cowls obscure much of the detail. A little dry-brushed silver highlighted the cylinder vanes, which looked great in 1/144 scale.



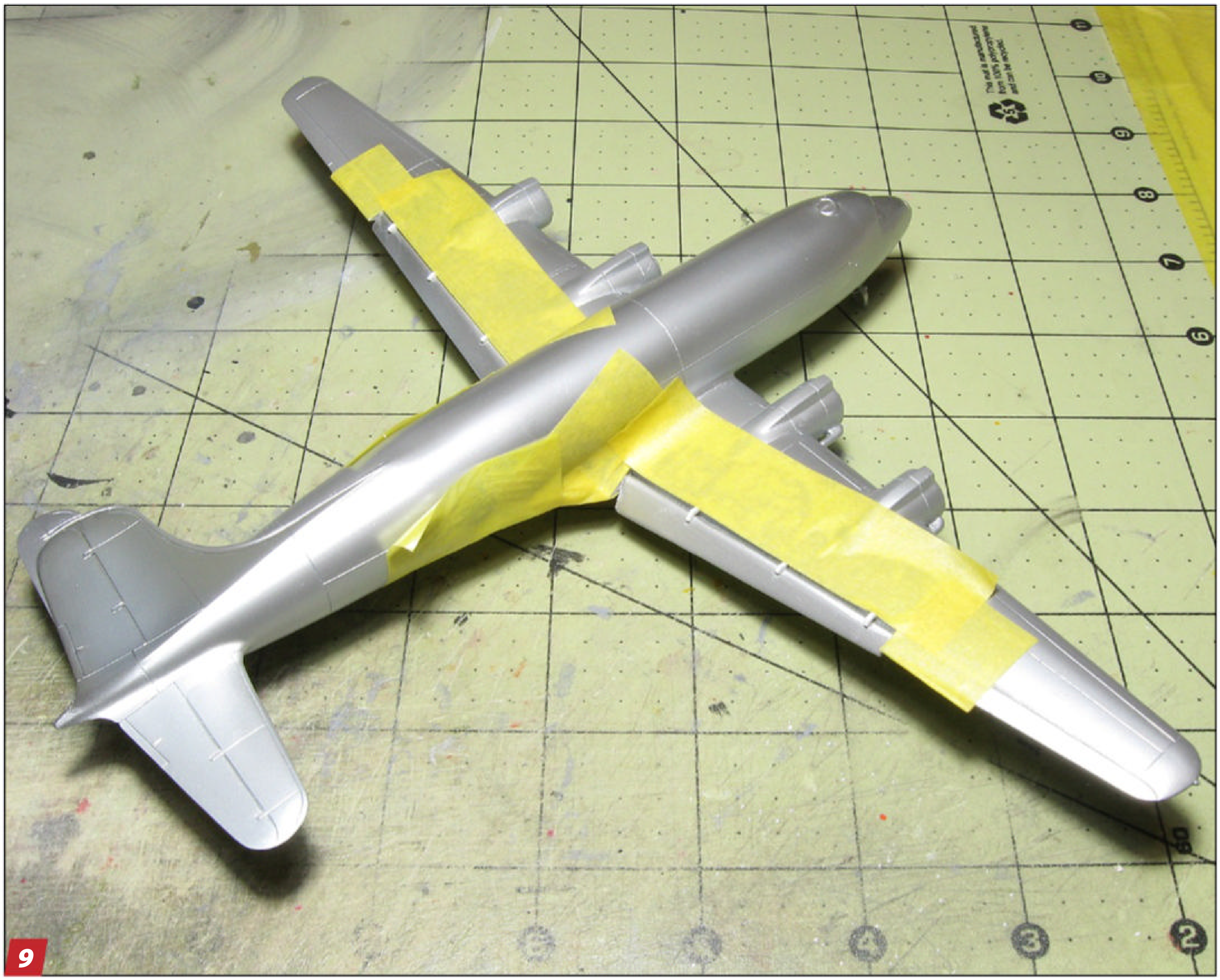
7

For the base natural-metal finish, I airbrushed both models with my cherished, but out-of-production, Floquil Old Silver, which produces a very hard base coat. (Tamiya Bare Metal Silver (No. AS-12) is a good substitute.)



8

I masked and sprayed various fuselage panels with Alclad II Dull Aluminium (No. ALC-117) or High Speed Silver (No. ALC-125) to complement the base coat. For the wing panels, I applied a mix of Alclad II Aluminium (No. ALC-101) and Duraluminium (No. ALC-102). With the basic painting done, I drew a soft pencil along the recessed panel lines.

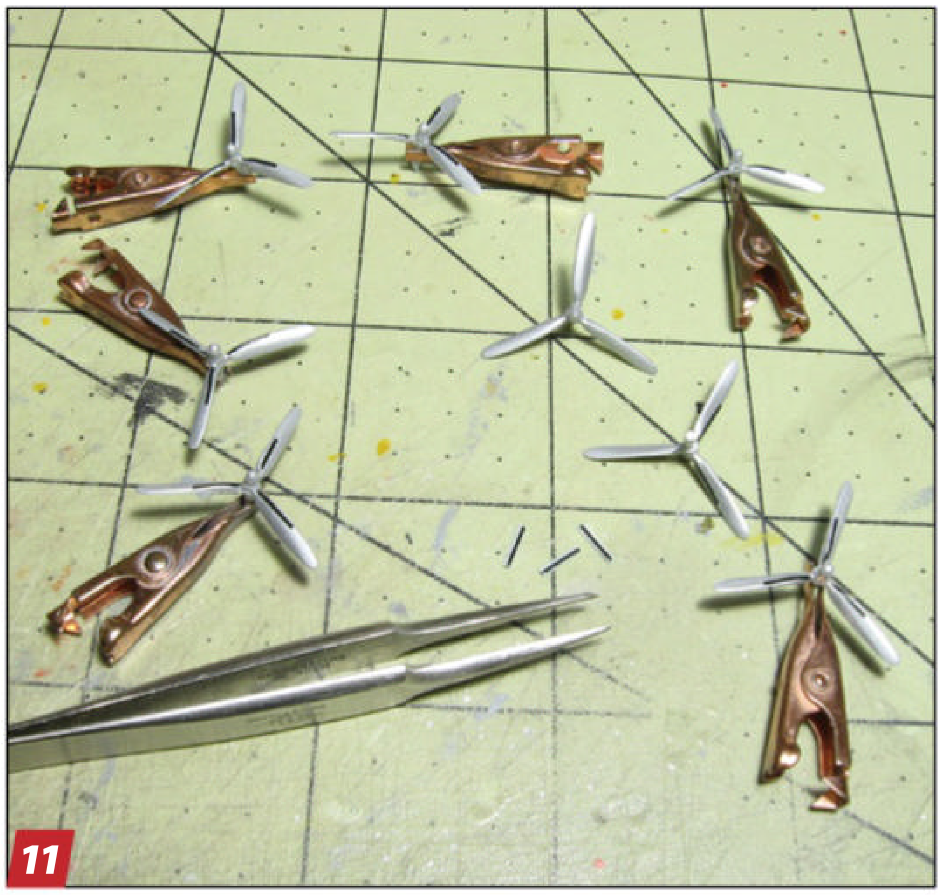


9

I made flap actuator arms for the dropped flaps by cutting thin slices of styrene tube in half and gluing the resulting curved sections between the flaps and trailing edge. After masking the flaps, I airbrushed them with the same mix I used for the wing panels and hand-painted the actuators with Testors Steel (No. 1180TT).

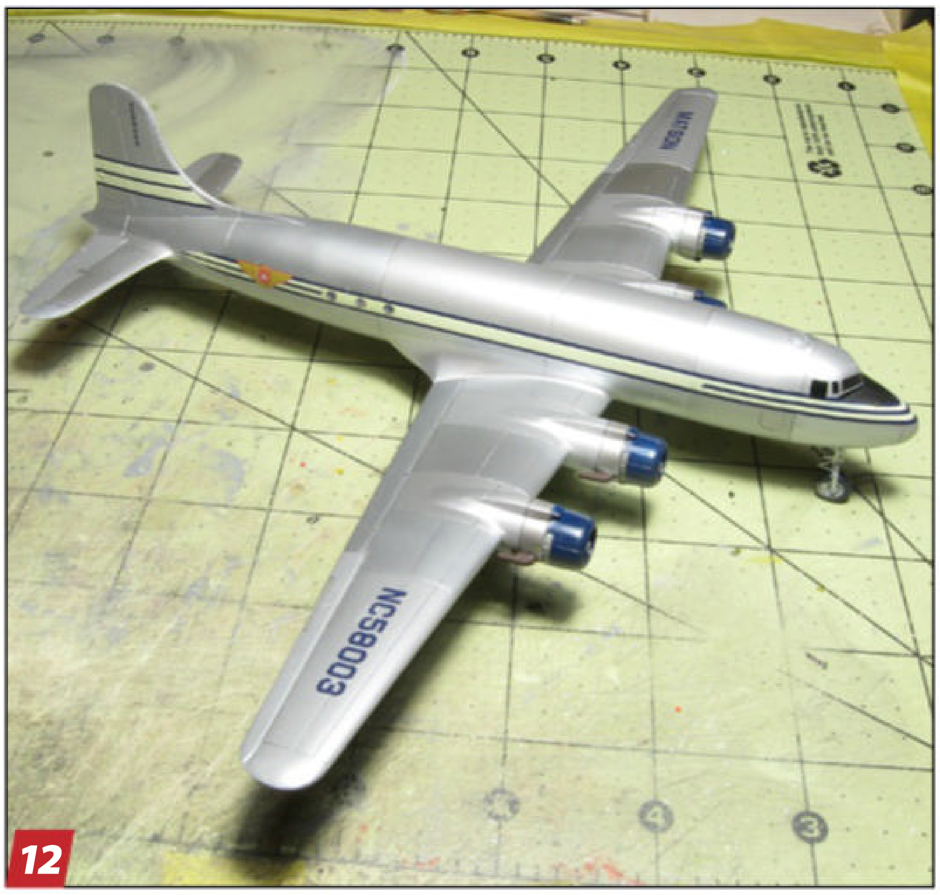
10

The remaining control surfaces were sprayed with dull aluminum. For the exhausts, I hand-painted Vallejo Panzer Aces Dark Rust (No. 70.302) after dabbing black paint into the drilled ends to lend the pipes depth.



11

After spraying the propellers aluminum, I applied short strips of black decal to their leading edges to represent the deicer boots. It was tedious work and I touched up gaps between the front and back of the blades with black paint. I later hand-painted the hubs with out-of-production Testors Model Master Chrome Silver (No. 1790).



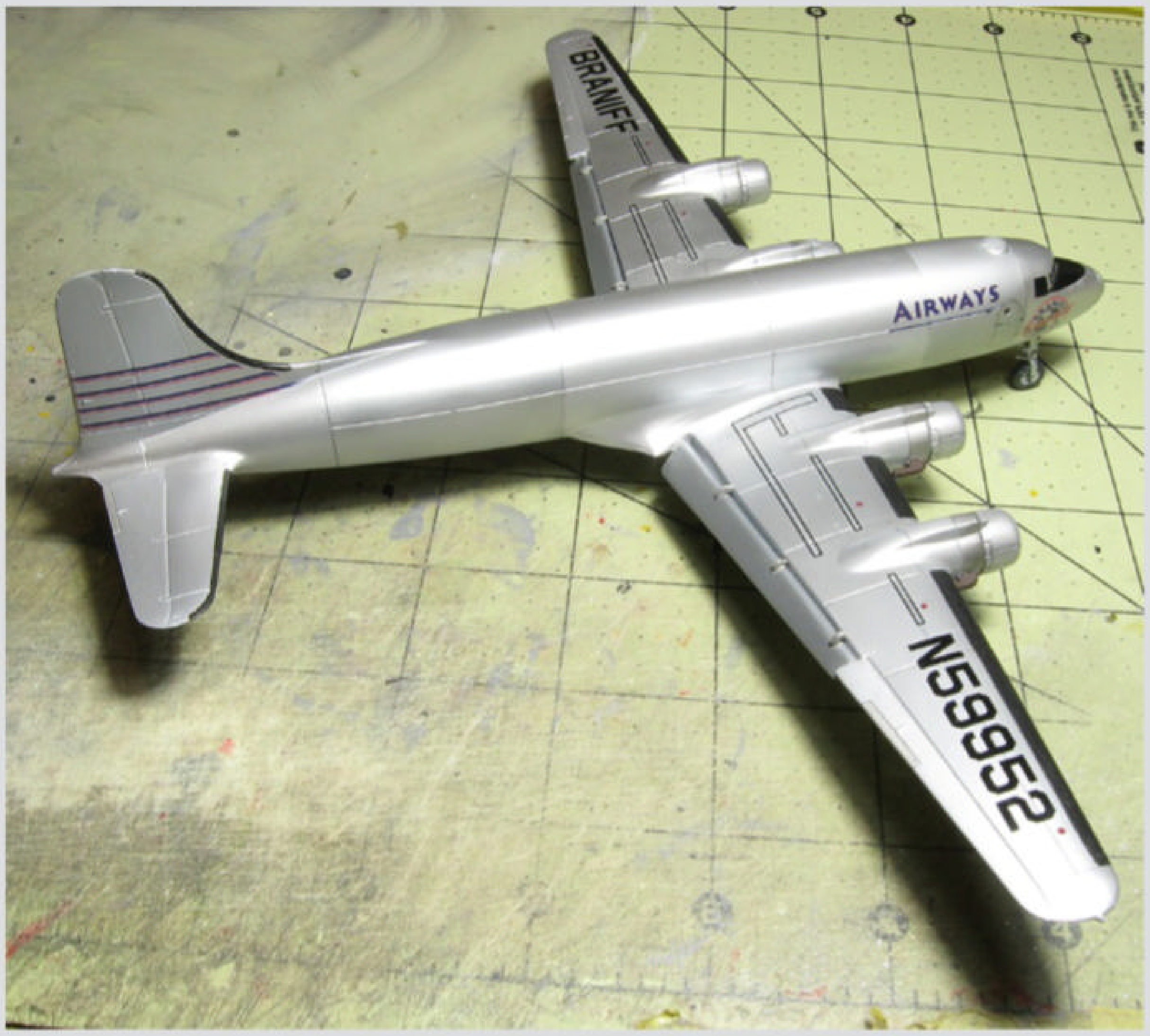
12

I sprayed the Matson Lines cowls with Testors Dark Blue enamel (No. 1111TT), a match for the stripes on the decals, and then glued them to the nacelles. Before attaching the wheels, I painted the tires with Vallejo Model Color Black Grey (No. 70.862) and the rims Tamiya Flat Aluminum (No. XF-16). I left off the props and gear doors while applying decals for fear of breaking one or more.

Applying the decals

I FOUND THE VINTAGE FLYER DECALS to be extremely thin and they needed very warm water to separate from the backing paper. I quickly determined that a square, flat brush worked better than a rounded one to slide the decals off. Gentle pressure moved the decals, too much pressure seemed to reattach the markings to the backing paper. Microscale Micro Set brushed onto the surface helped the decals float onto the surface and Solvaset settled them.

I cut the cheatline on the Matson livery into four segments and sliced the long Braniff International Airways titles into three to ease application. Getting those on the models helped align the separate windows. Similarly, bisecting the vertical tail striping for the Braniff DC-4 made it easier to apply. Having started with two different releases of the Minicraft DC-4, the kits had different wing walkways on the decals. I used poetic license to show different ones on each model. The Matson Lines sheet had prop-tip decals that were difficult to apply, but I won that battle with the aid of Solvaset. Tiny manufacturer logos for the propellers were also provided, and they were tedious to align. I had a choice of kit or Vintage Flyer decals for the deicer boots, but, after running into problems wrapping them around the leading edges, I hand-painted them instead. I punched out black decal circles for the base of the astrodomes to make them look open to the interior before attaching the clear parts. The antennas were the last parts added; a photo of the Braniff DC-4 showed a ring antenna aft of the astrodome, so I added one from my spares box.



BRANIFF International AIRWAYS
N59952
NC-59952
952
BRANIFF

MATSON LINES
NC58003

FINAL THOUGHTS

BOTH MODELS represent the beginnings of four-engine airline travel, and these elegant, yet simple schemes have given way to more decorative schemes. Building two kits at the same time made the project seemingly go on and on, especially with all the masking and panel work on the natural-metal finishes. But it was ultimately time well spent because I now have a couple of vintage DC-4s in my showcase. If you're unsure what to build next, consider an airliner. They are colorful and, in this case, historically important to the evolution of aviation. **FSM**

BRANIFF International AIRWAYS
N59952

Using
SUPERGLUE

Getting the most out of this versatile adhesive

BY GREG GARAND

1

Even if you've only built one or two models, you are no doubt aware that various types of glue are needed for different situations. For me, superglue is a critical part of my workbench, and it should be on yours, if it isn't now. Superglue has applications that no other adhesive can approach. It is the first choice for attaching photo-etched metal (PE) to plastic, resin, or other PE, and works in most instances to attach resin to pretty much any material. Some modelers use it as the basic glue for assembly. Given all that, superglue is one tool that I depend on almost every time I sit down to model.

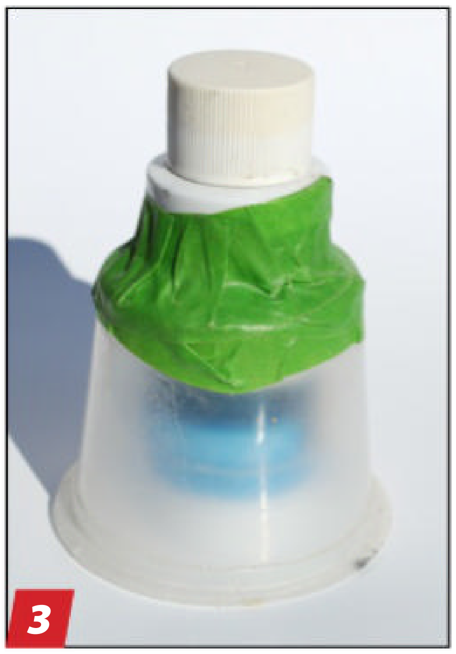
Types of superglue

Superglue comes in a variety of viscosities, from very thin to a thick gel, and each has its applications, ***1***.

Thin is usually fast drying and great for attaching fine PE parts or antenna wires where you don't want to hold it in place for any length of time. Often, with thin superglue, all you need to do is hold the parts together and touch the applicator to the join. The liquid will be drawn readily into the gap.

bSi
BOB SMITH INDUSTRIES
INCORPORATED
ACCELERATOR
INSTA-SET™
100% FOAM SAFE
2 fl. oz
FOR ALL CA GLUES
WARNING
COMBUSTIBLE LIQUID

2



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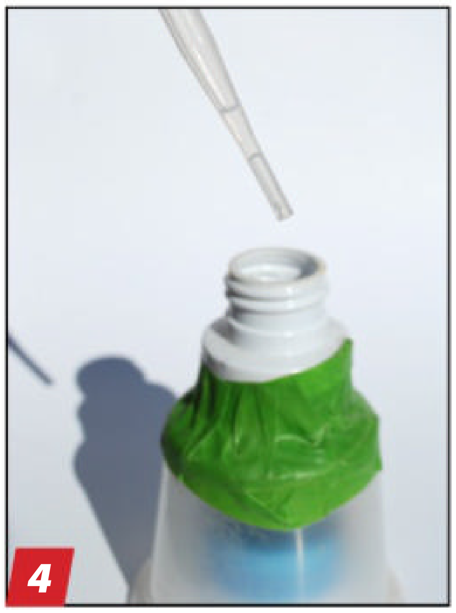

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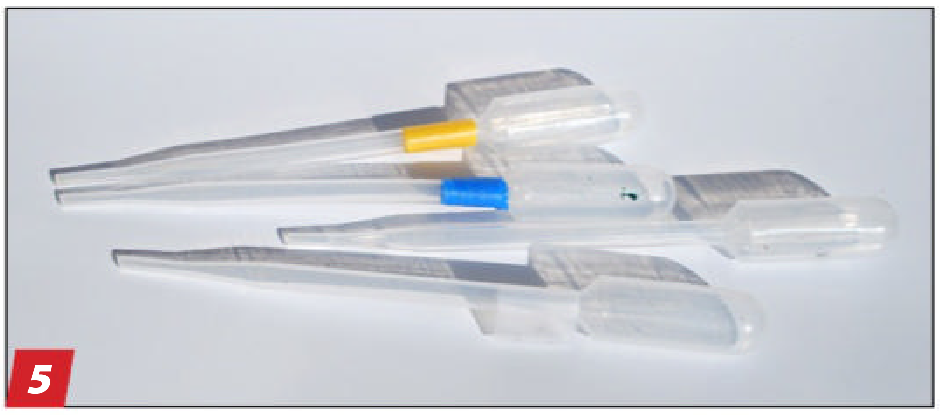
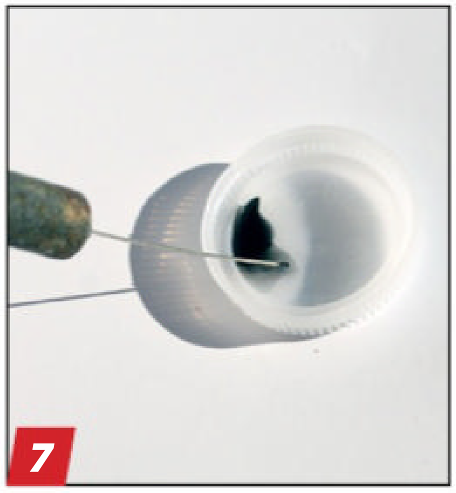


5

bSi
BOB SMITH INDUSTRIES
INCORPORATED
TIRE GLUE
20-45 SEC.
CARBON & RUBBER TOUGHENED
IC-2000™
Net wt.
1/2 oz.
(14g)
CYANOACRYLATE

6



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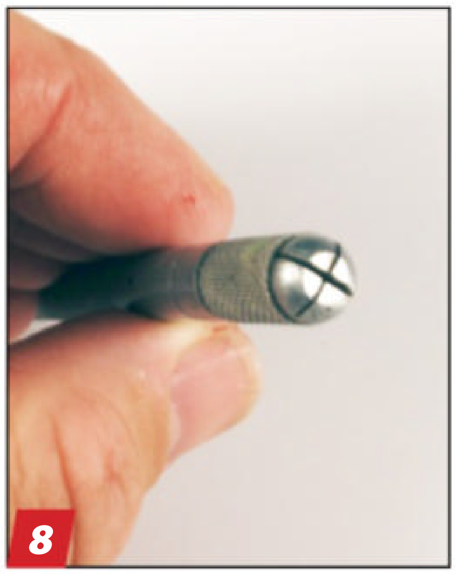


8

Medium viscosity, sometimes referred to a gap-filling, takes a few more seconds to set so you have a little more working time. This formula is not runny, so it stays where you put it, but it's thin enough to be easily drawn along and flow into gaps.

Thick or gel superglue is, as the name implies, unlikely to flow. It takes longer to set but is great for attaching larger parts and given its extra mass, is handy for filling gaps.

I often mix viscosities, like thin and medium to make a glue that flows easily but still has enough mass to bridge gaps. Experience shows which types are the best to use and how to work with them, so experiment.

Superglue accelerator is always useful to have on hand, ***2***. As the name implies, it speeds superglue curing so it is great for locking a part in place and one well-placed drop is usually all that's needed. The trickiest part is getting the accelerator on the model while holding the part in place. A warning: Superglue and accelerator together create intense heat, especially on skin — I got my first chemical burn that way — so exercise caution when using it. Also, some accelerators can craze plastic, so it's a good idea to test it on sprue or an unused part.

Open accelerator bottles seem destined to be knocked over. To prevent this, I keep mine in an upsidedown pudding cup with a hole in the bottom just big enough to fit snugly around the bottle, ***3***.

I apply accelerator with either a paper clip or a pipette. Dip the tool in the accelerator to pick up a drop. If using a pipette, squeeze out any accelerator the tube has picked up; what's left on the tip when you hold it vertically, tip down, is just right for most uses, ***4***. Squeeze that onto the glue.

I mark my pipettes with tape to denote the specific chemicals I use them for: clear for accelerator, blue for lacquer thinner, etc., ***5***. This avoids cross contamination and helps keep costs down by extending the life of the pipettes.

Most superglue goes on clear and can be difficult to see, which, in turn, can lead to excess glue buildup. Many superglue manufacturers now offer a rubberized superglue that goes on black and is easier to see, ***6***. It acts slightly differently and has a bit of a different feel, but it works well.

Applying superglue

It is an extremely rare occasion when I apply superglue directly out of the bottle. Instead, I add a drop or two — normal applications require the tiniest amount of glue — in a plastic bottle cap. Be sure the cap is completely dry. You could use almost any nonporous, disposable surface such as a square of styrene or an old CD, but I like having the small reservoir that a cap affords so I can mix viscosities. Also, thin superglue can't spread out in a cap and dry prematurely; the bottle cap helps keep it contained and usable longer. I often mix black superglue with thin superglue in these caps to get a consistency that I find suitable for my need at the time, ***7***.

Applicators

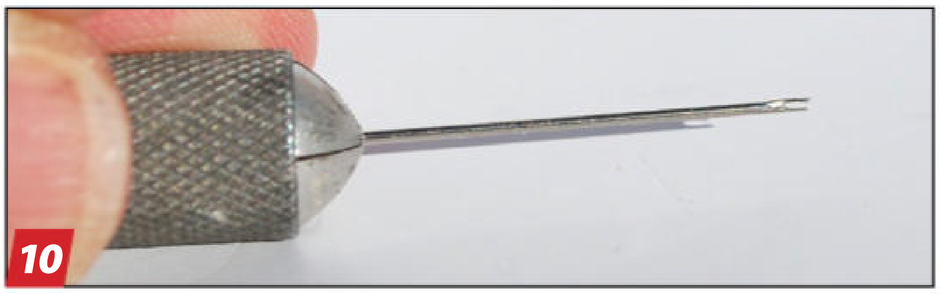
While you can buy specialist tools to apply superglue, such as the Glue Looper, all of mine are homemade. The two I use most started life as X-Acto knife handles, but whatever brand you use, be sure it has a four-part mandrel rather than just two like many hobby knife

Safety

WHILE SUPERGLUE IS IMMENSELY USEFUL, it can be frustrating. It can only take a matter of seconds to attach a part, seemingly permanently, in the wrong place. More importantly, if not treated with care, superglue can be dangerous. Although, the time-worn image of a modeler gluing their fingers together or to the model may seem cliché, we've all done it — and probably more recently than we'd care to admit. Keep debonder or remover nearby whenever you are working with superglue. It will loosen the glue's hold allowing you to reposition parts and save layers of skin that might otherwise be sacrificed to the modeling gods!

Eye protection is equally important, because superglue, especially the thin types, can splash. Always wear eye protection; I can think of at least three occasions when my eyes were saved from splashing glue because of my glasses. Open bottles facing away from your eyes and carefully pour what you need in a way that reduces splashes.

If you have an accident that can't be resolved with debonder or get superglue in your eyes, mouth, or nose, seek emergency medical help immediately.



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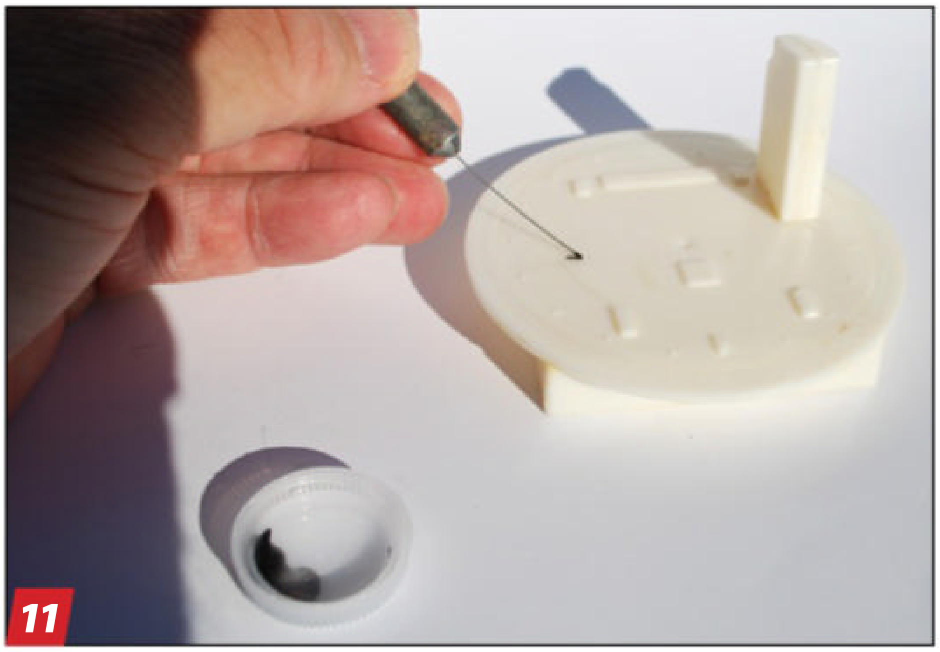


11

12

9

D'Addario
HIGH CARBON STEEL
.009
ACOUSTIC & ELECTRIC GUITAR
FIVE SINGLE STRINGS

handles, which will provide better stability for the tool, ***8***.

One of my applicators has a piece of straightened guitar string, ***9***. Any thin, stiff wire will work but I swear by guitar string. Moreover, if you know any would-be rock 'n' rollers, they are usually happy to give you broken strings for free! Superglue adheres better to rough surfaces, so I lightly sand the end and then build up a little dry superglue on the end to facilitate the transfer of glue. If too much glue builds up, you can scrape it off with a dull No. 11 blade or burn it off — but avoid breathing the fumes.

My other go-to superglue applicator is a sewing needle chucked into the X-Acto handle point down with the exposed eye cut in half, ***10***. This open fork holds a tiny amount of superglue that can flow into a gap on the model. I keep both the modified sewing needle and the guitar string applicator on my workbench and in my travel toolbox and use each differently as various situations and problems arise.

Both applicators allow me to put a tiny dot of superglue exactly where a part needs to be attached, ***11***.

On small parts, such as PE, I hold the part onto the larger part until the bond starts to take hold, then flow on accelerator. I often think that putting PE on a model is less about gluing the part in place as it is getting the part to tenuously stay in place until paint permanently locks it down and seals the deal.

On larger parts, I apply glue to both surfaces before pushing them together. Any excess glue pushed out of the seam can be removed with debonder, ***12***. Apply it with a brush and wait until the superglue turns gelatinous. It can be wiped away with a cotton swab, brush, a hobby knife, or tweezers.

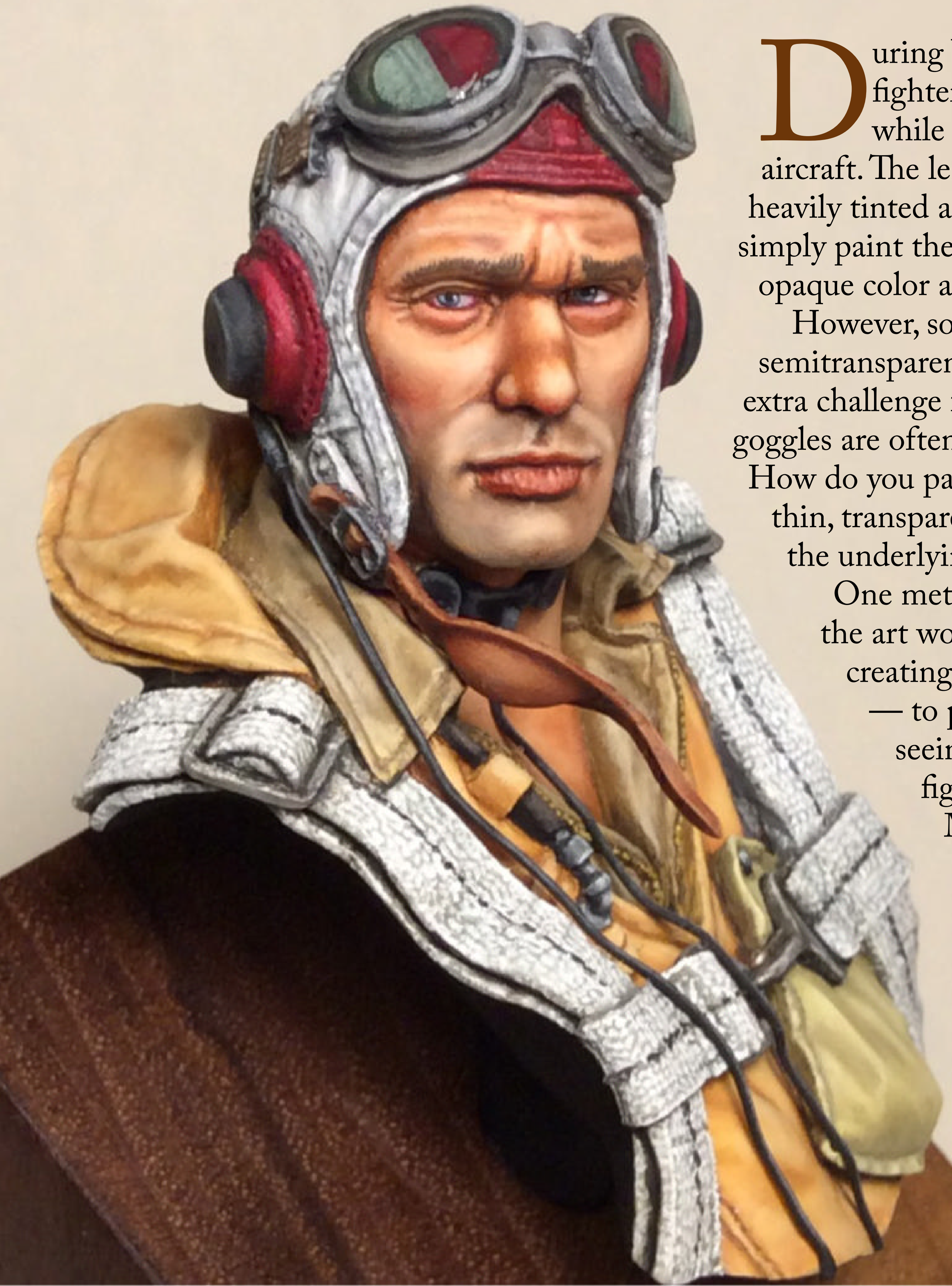
It's best to do this before painting, although excess glue may not show until you've added paint. In that case the debonder will remove any paint it touches as well as the superglue. And, as stated earlier, debonders can affect plastic, so look for one that claims to be styrene safe. Vantage Modeling Solutions, vms-supplies.com, has such an animal.

As always, getting the most out of a product such as superglue and the associated tools and techniques requires experience and practice. I hope this helps. **FSM**

A CLEAR CHALLENGE

Simulating transparent lenses with paint

BY BRIAN WILDFONG

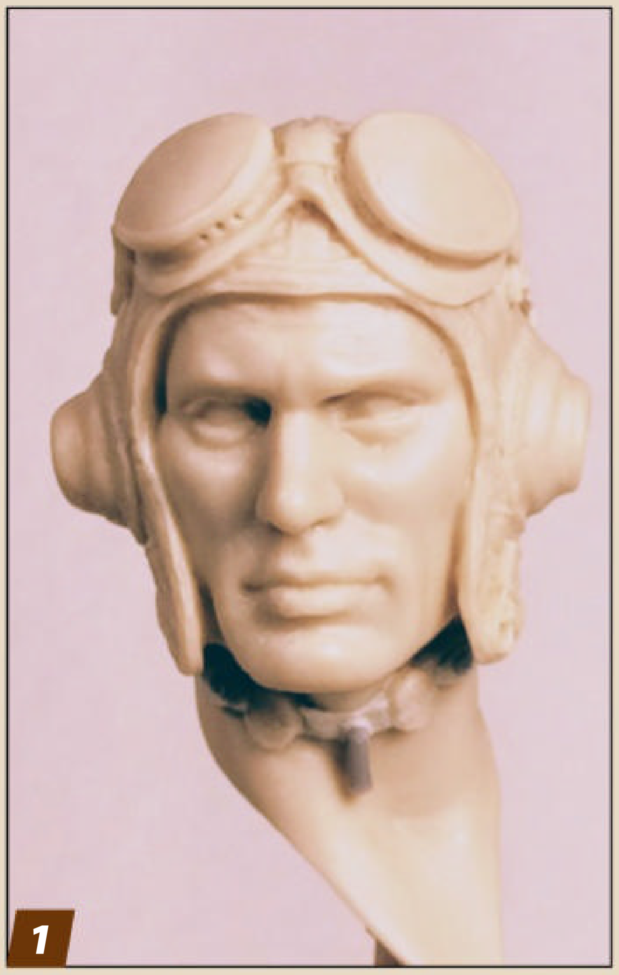


During World War I and World War II, fighter pilots frequently wore goggles while flying, especially in open-cockpit aircraft. The lenses of these goggles were often heavily tinted against the sun and many modelers simply paint the lenses on figures with a dark, opaque color and happily move on.

However, some lenses were lightly tinted, semitransparent, or completely clear. That poses an extra challenge for figure or bust painters, because goggles are often integral with the figure's headgear. How do you paint a solid resin lens to look like a thin, transparent piece of plastic through which the underlying detail can be seen?

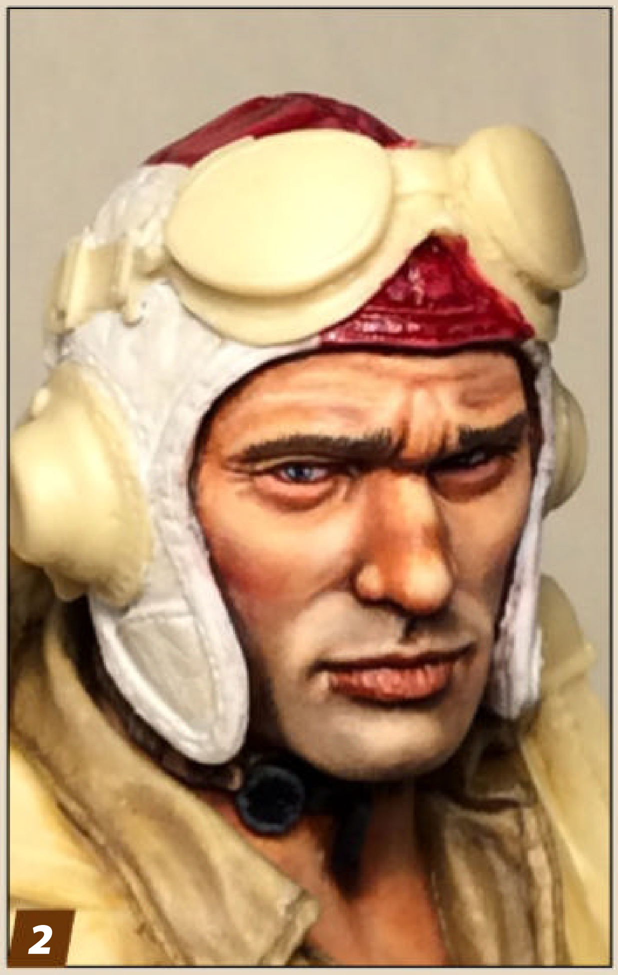
One method is to borrow a technique from the art world known as *trempe l'oeil* — creating realistic 3D effects on a flat surface — to paint details and fool the eye into seeing detail that wasn't cast into the figure. That was the case with a Young Miniatures 1/10 scale bust of a WWII U.S. Navy aviator.

Looking at the goggles perched on the head of the 1/10 scale bust of a Navy flier, you would swear the lenses are clear. But they started as the same yellow resin as the figure.



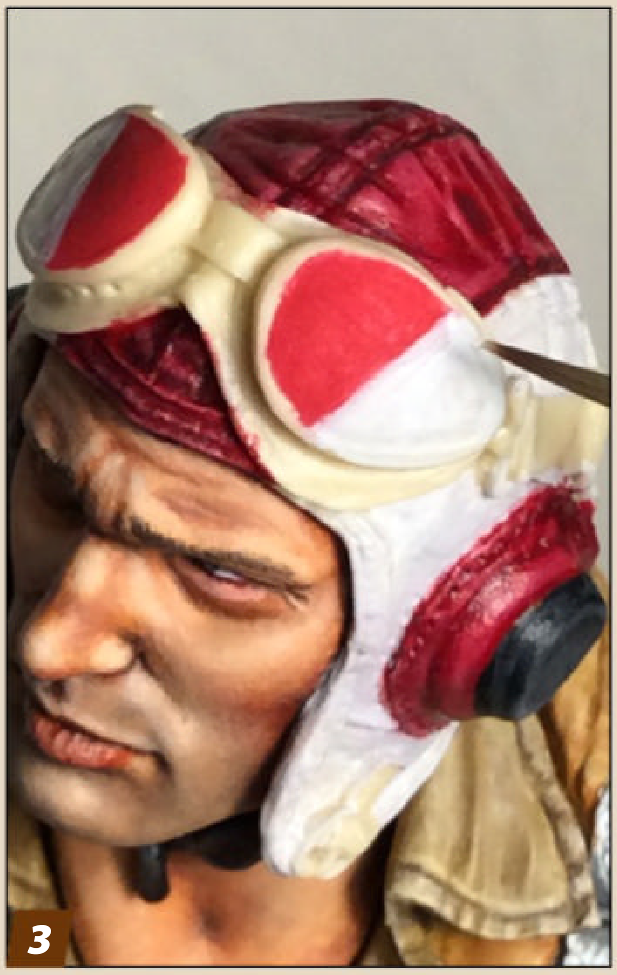
1

Young Miniatures' U.S. Navy Aviator is beautifully sculpted and cast. But note the goggle lenses with their flat, opaque surfaces.



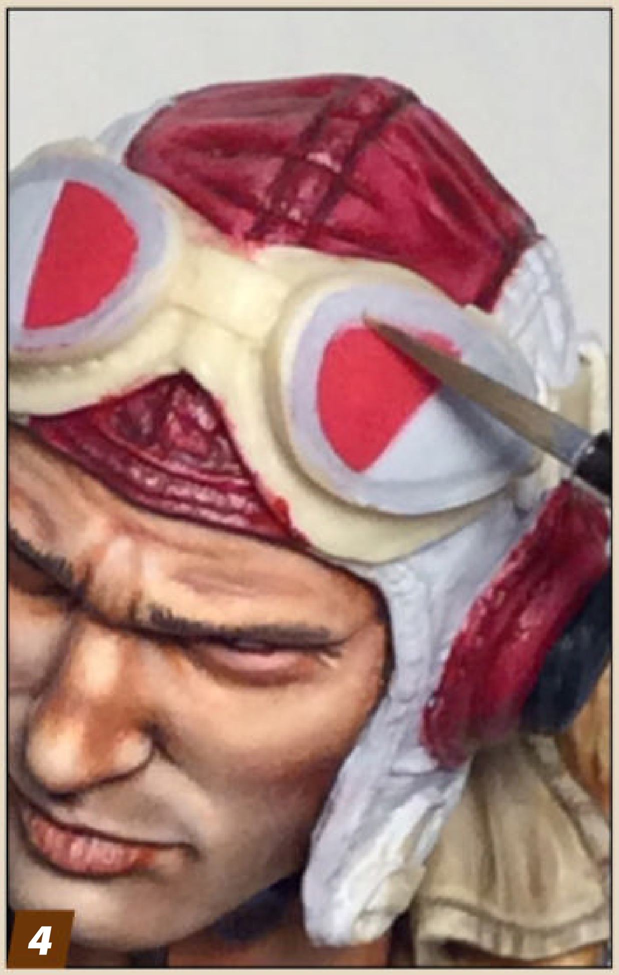
2

The colorful flying helmet is based on those worn by pilots of VF-16 operating from USS *Lexington* in late 1943. Notice the borders between the red and white pass under each lens, something I'll need to paint on the lens surface.



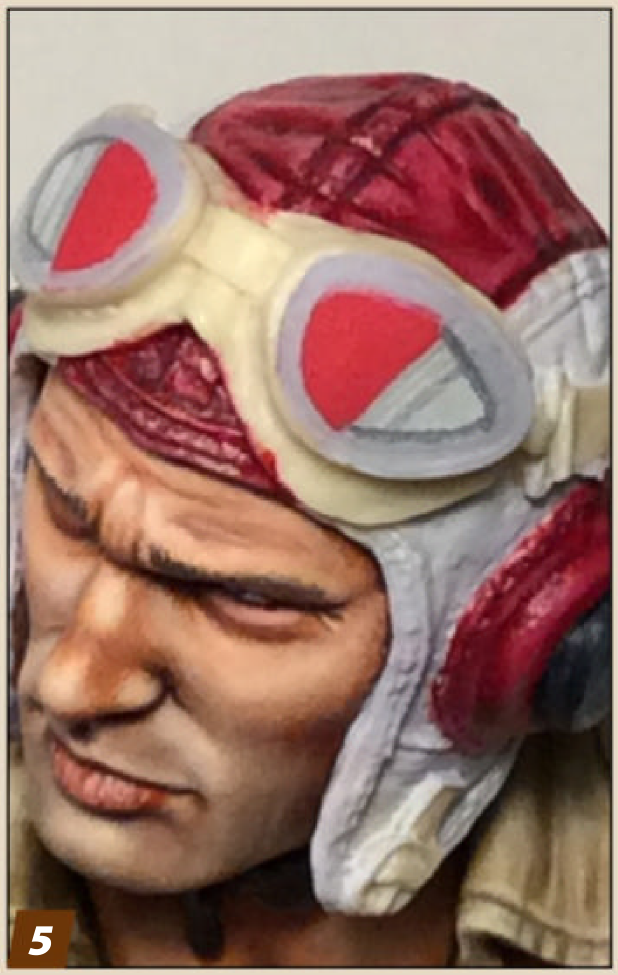
3

Using the same colors I brushed on the helmet, I painted the red and white areas on each lens with craft acrylics, ensuring they match the borders on the helmet. I added shadows and highlights with Winsor & Newton artist oils.



4

Using a No. 0 brush, I painted acrylic gray around the inner edge of each lens. This will simulate the rubber frames.



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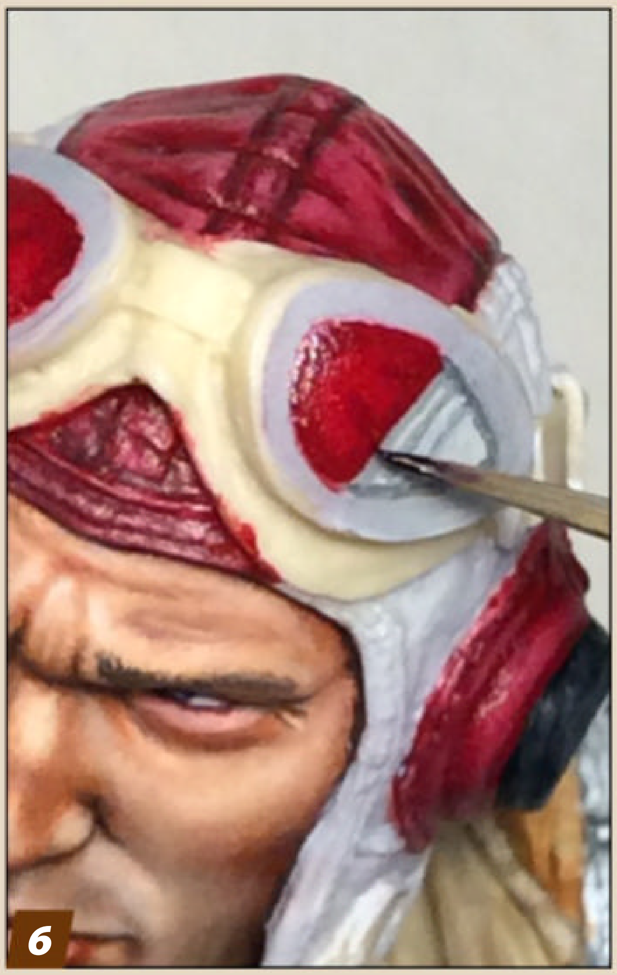
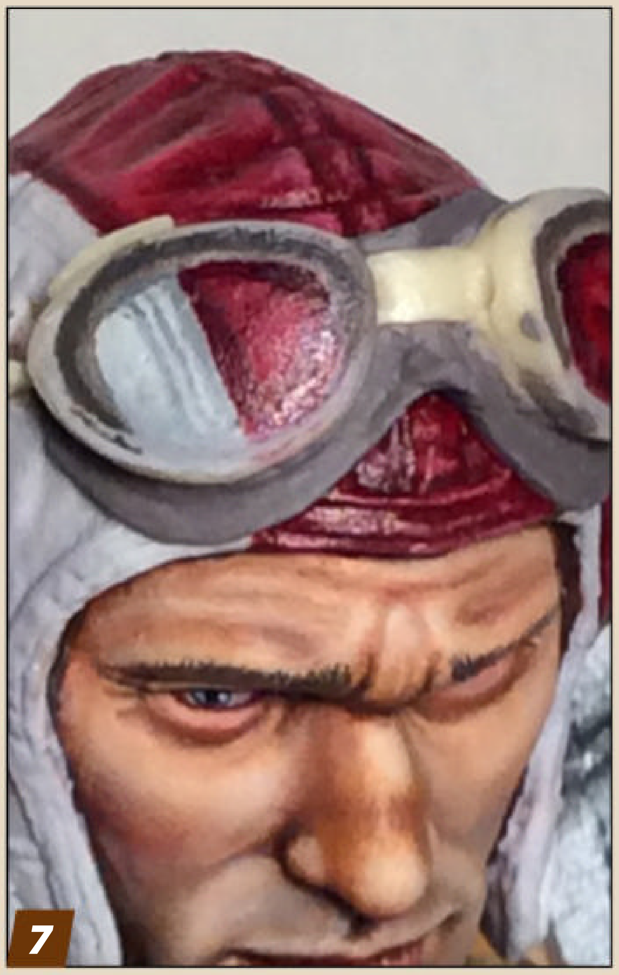
Other details needs to be carried from the helmet to the lens as well. A pale gray replicates stitching molded on the helmet and a darker gray gives the impression of a shadow where the frame touches the helmet. I used a No. 00 brush for these details.



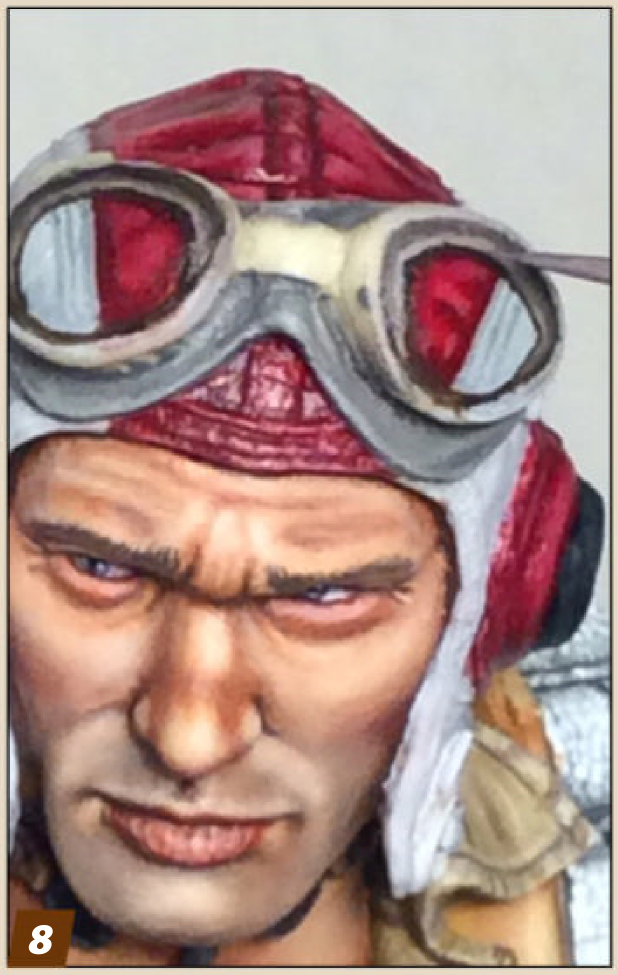
6

The red area of the lens receives painted-on wrinkles and seams with the same artist oils I used to shade the red of the helmet. I mimicked the surrounding molded detail to get these just right.



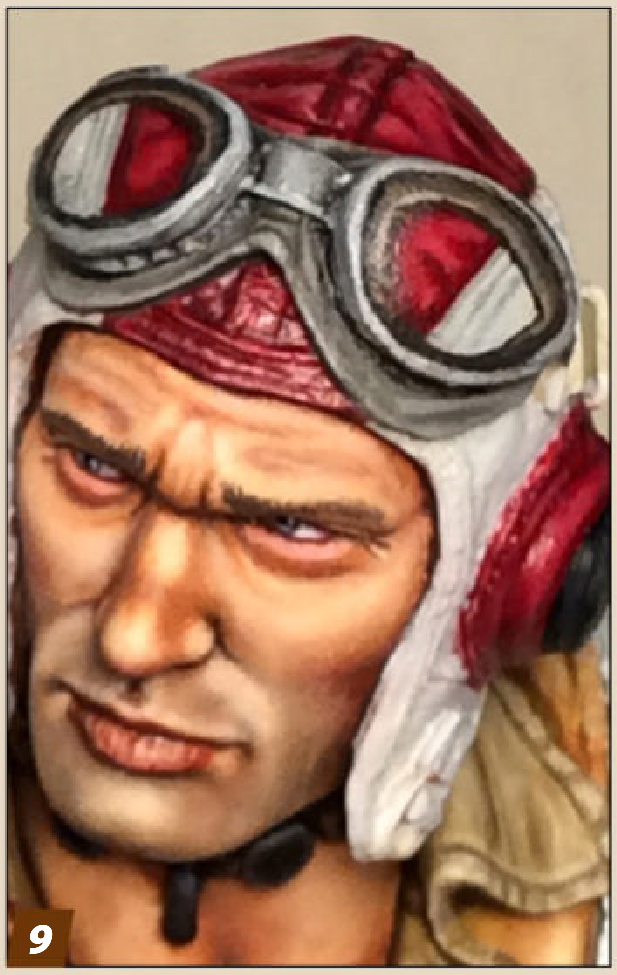
7

Using raw umber oil paint and a No. 00 brush, I added a darker line to the top edge of the lens to simulate the shadow cast inside the lens by the aluminum outer rim.



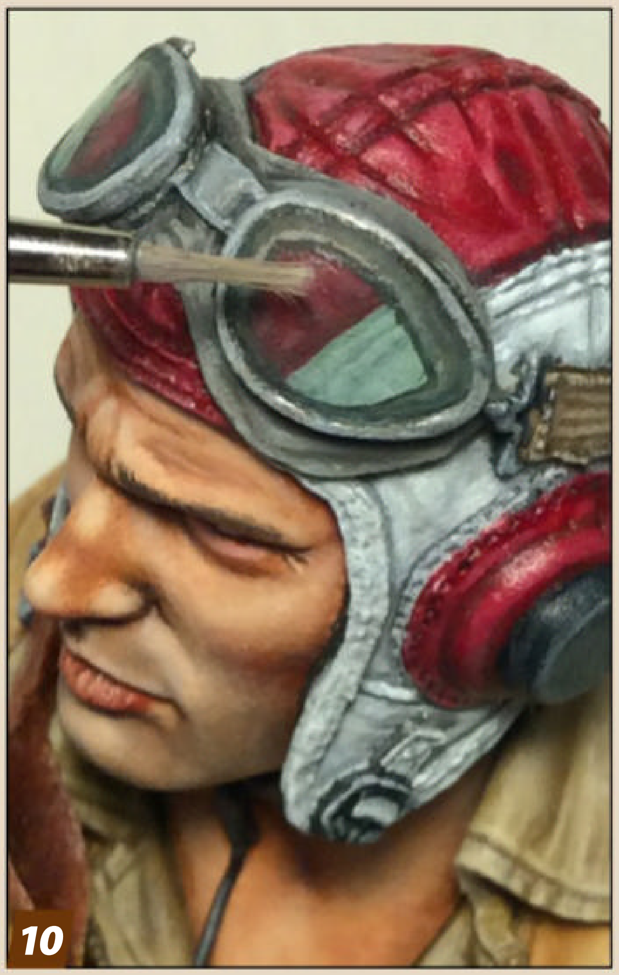
8

A very thin line of lamp black oil paint applied with the No. 00 brush marked the shadow that would be cast by the inner edges of the goggles contacting the helmet.



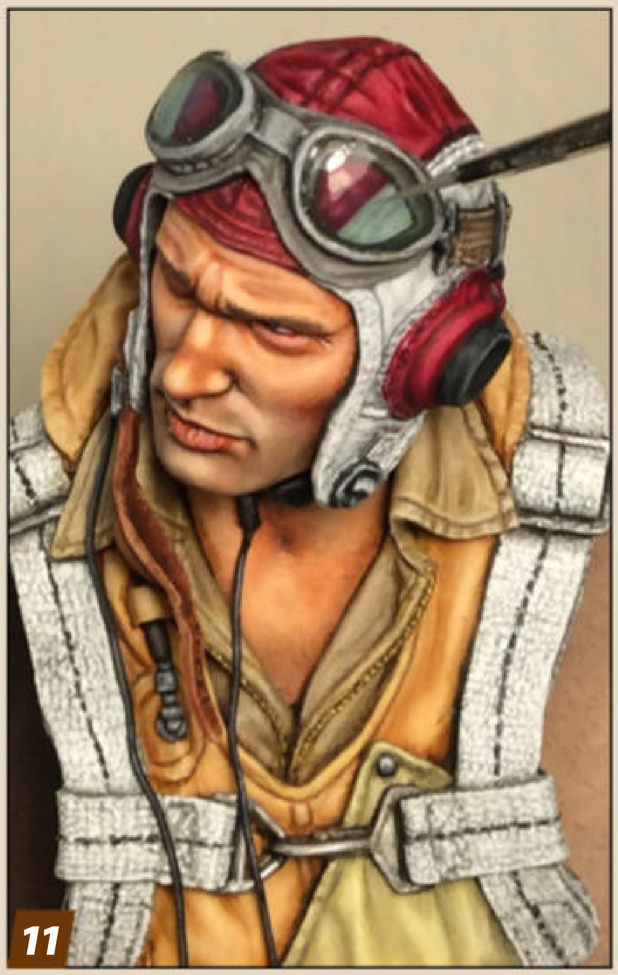
9

I added the aluminum outer frame with acrylic silver and shadows and highlights of black, gray, and white oil paint. From this angle, the transparent effect of the trempe l'oeil technique is particularly clear! *Hah!*



10

Even completely clear lenses have a slight color cast. Once the oil paints were well cured — 3-4 days — I mixed a blue-green color from craft acrylics, thinning with about 90% water. The effect of the glaze is very subtle, but wait for a coat to dry completely before the next.



11

After flat coating the completed bust, I added a final touch to the lenses. Applying two coats of Liquitex Gloss Varnish produced a surface sheen that catches and reflects the light — just like glass!

FINAL THOUGHTS

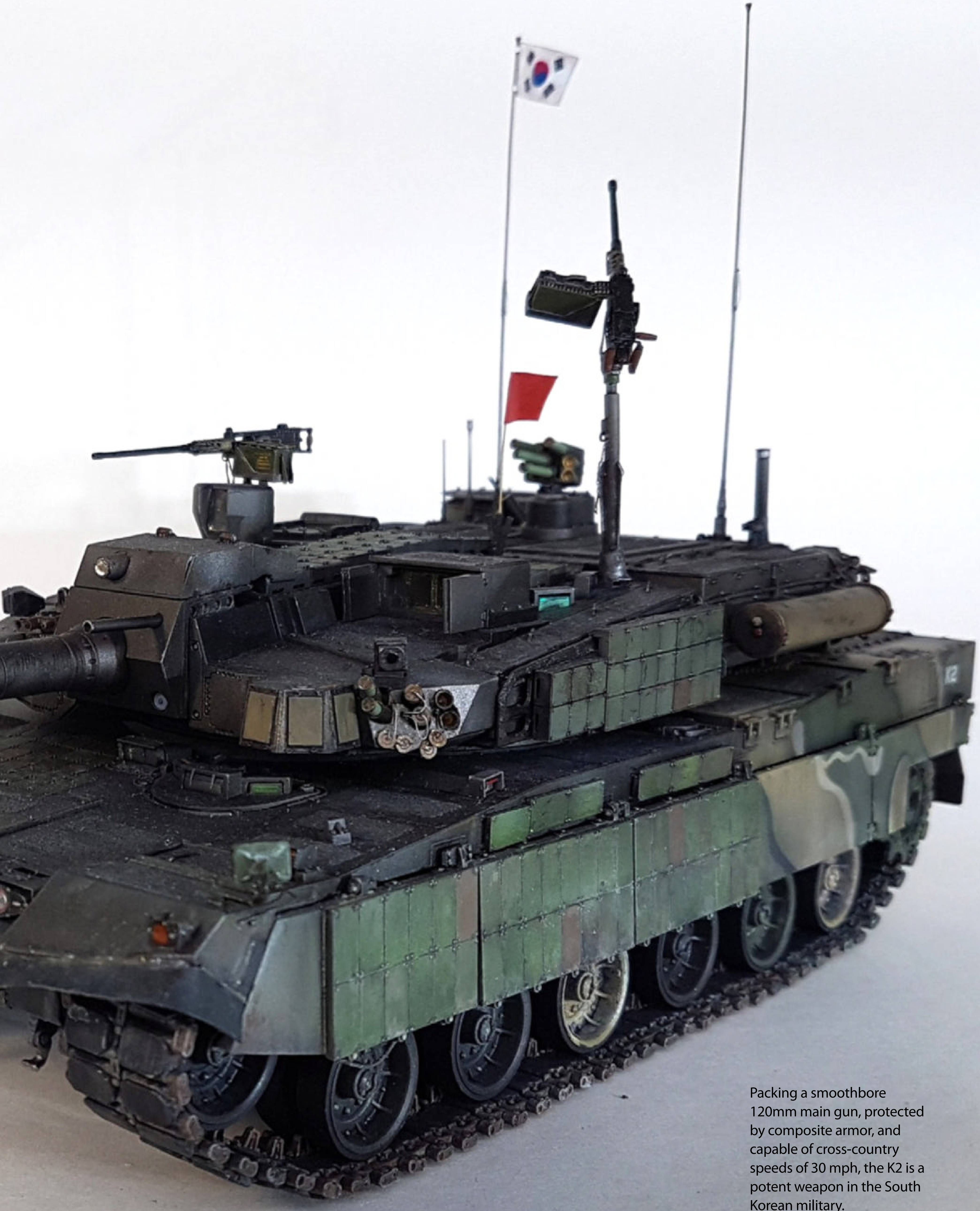
FOR MY FIRST ATTEMPT using trempe l'oeil to create the illusion of clear lenses, I'm pretty happy with the result. Although it seemed intimidating, by carefully studying the work of other more experienced painters via books and internet posts, I could break the effect down into a series of simpler, less intimidating steps that I could handle and enjoy. Nothing could be *clearer* than that! **FSM**

SINK YOUR CLAWS *into a* BLACK PANTHER

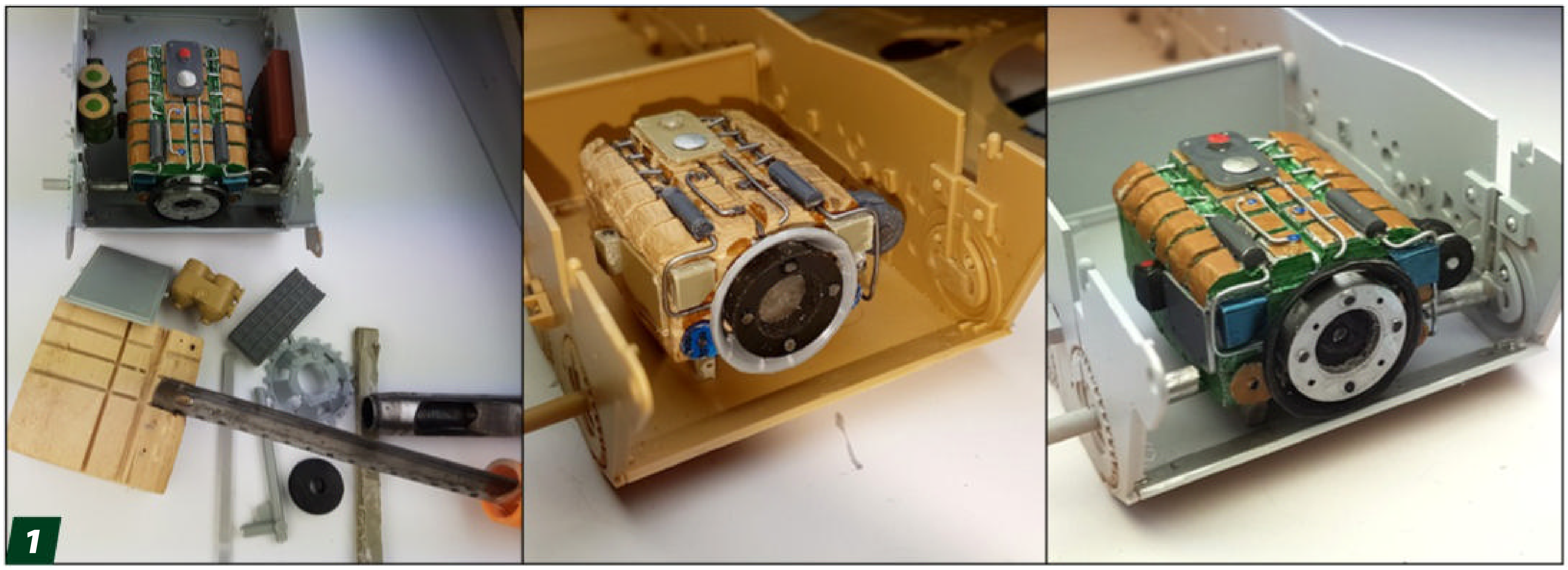
Scratchbuild details for a Korean tank

BY KAREL SUTT

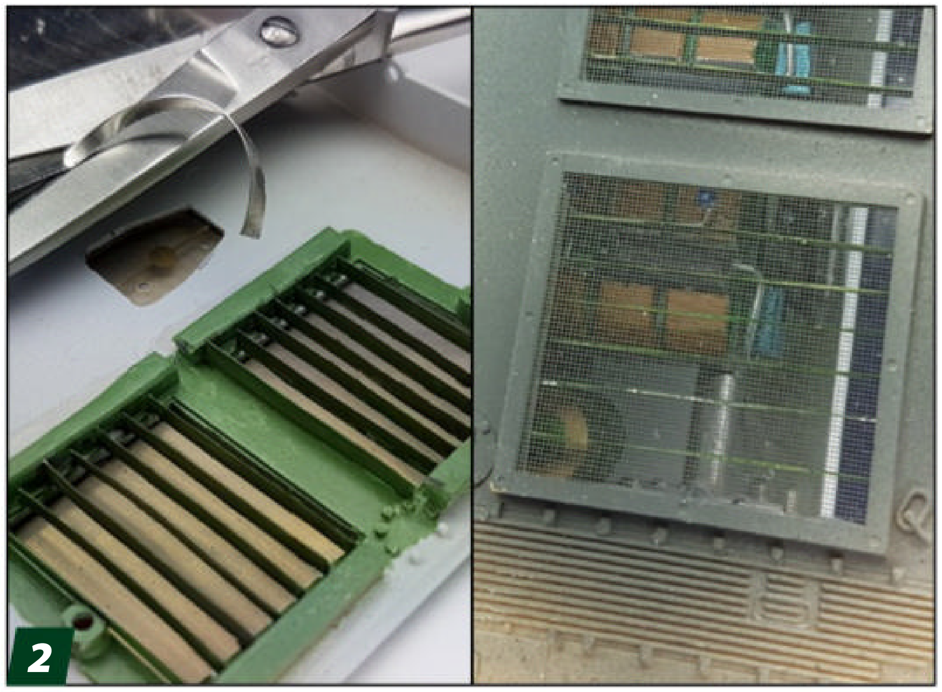
Never having built a South Korean subject, I was happy to tackle Academy's 1/35 scale K2 Black Panther. My first thought when I read the name was the source animal's black coat, but I thought painting the vehicle solid black would make it look humdrum. (I like to have some fun when painting armor!) After several days contemplation, inspiration hit: I could paint the tank's rear half in standard camouflage and let it transition to shades of black moving forward. Before starting, I scoured the internet for photos so I could refine and accurize the kit's details. To dress up the kit, I used the MK1 Design photo-etched metal (PE) set and grabbed a Hauler .50-caliber machine gun (No. HLU35023) to add firepower.



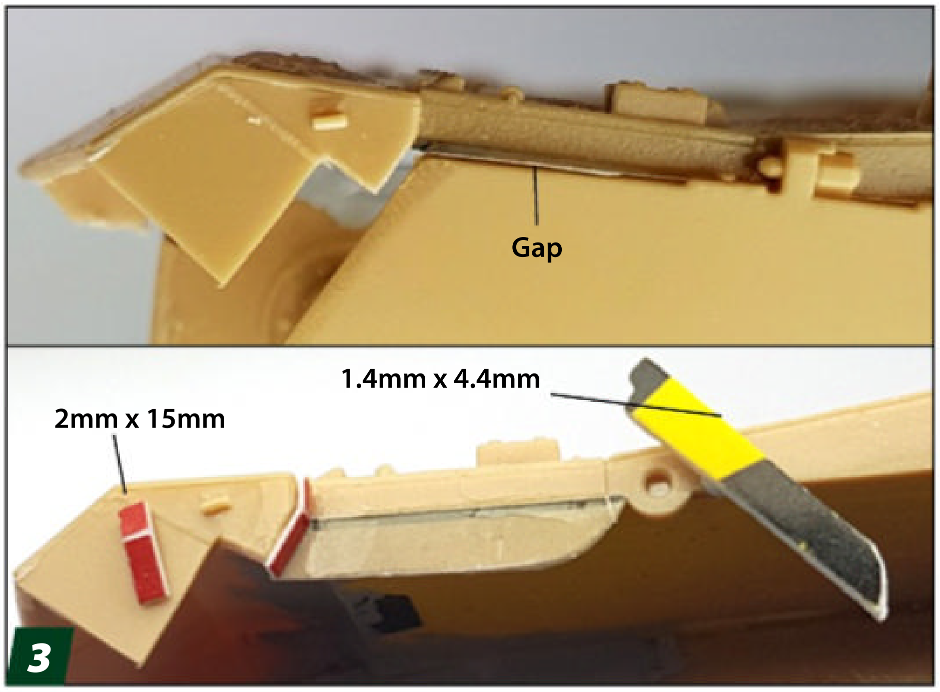
Packing a smoothbore 120mm main gun, protected by composite armor, and capable of cross-country speeds of 30 mph, the K2 is a potent weapon in the South Korean military.



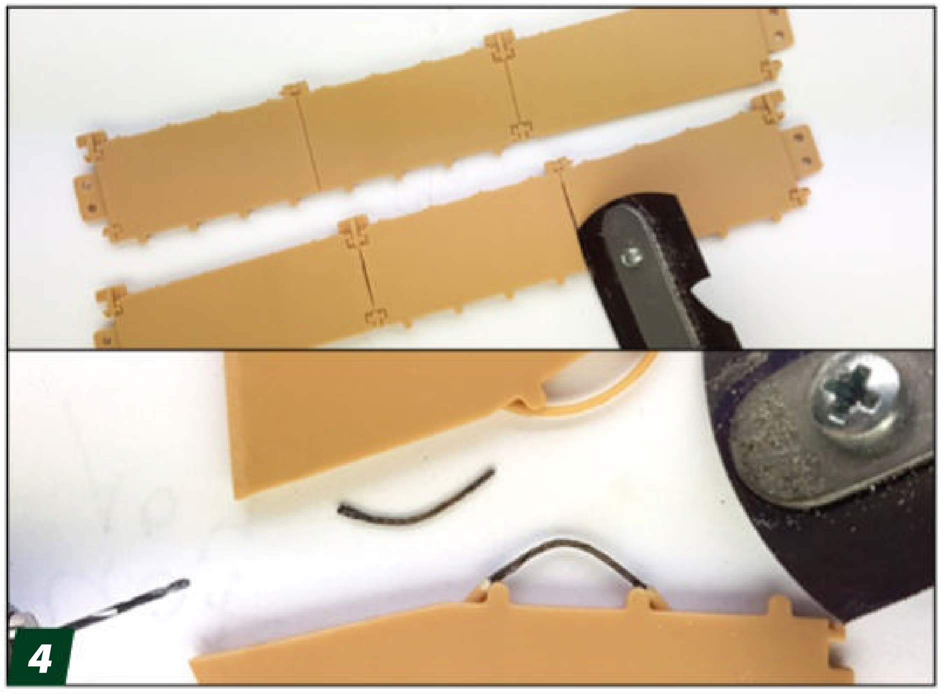
I was disappointed that the kit lacked an engine, because the aftermarket PE engine screens reveal a horribly empty space. I made a reasonable facsimile of the MTU MB-833 powerplant from a carved wooden block detailed with styrene, spare kit parts, and solder. Before joining the upper and lower hulls, I painted the engine and its compartment.



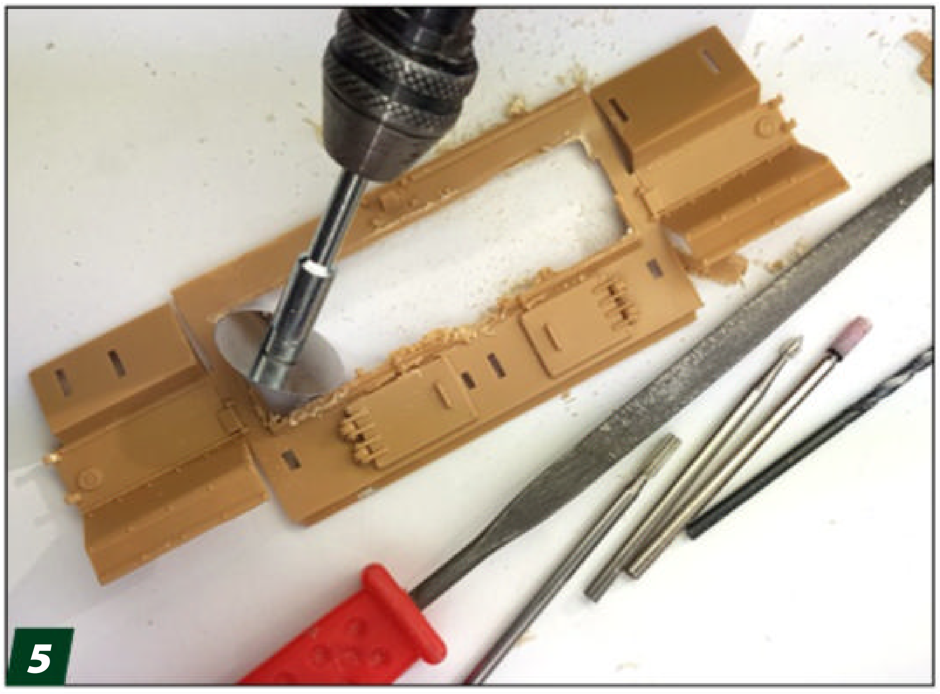
Before replacing the plastic screens on the engine deck with the aftermarket PE, I wanted to represent the louvers inside the large square openings. Unable to find good references, I cut 14 thin strips of aluminum sheet and superglued seven under each of PE mesh screens.



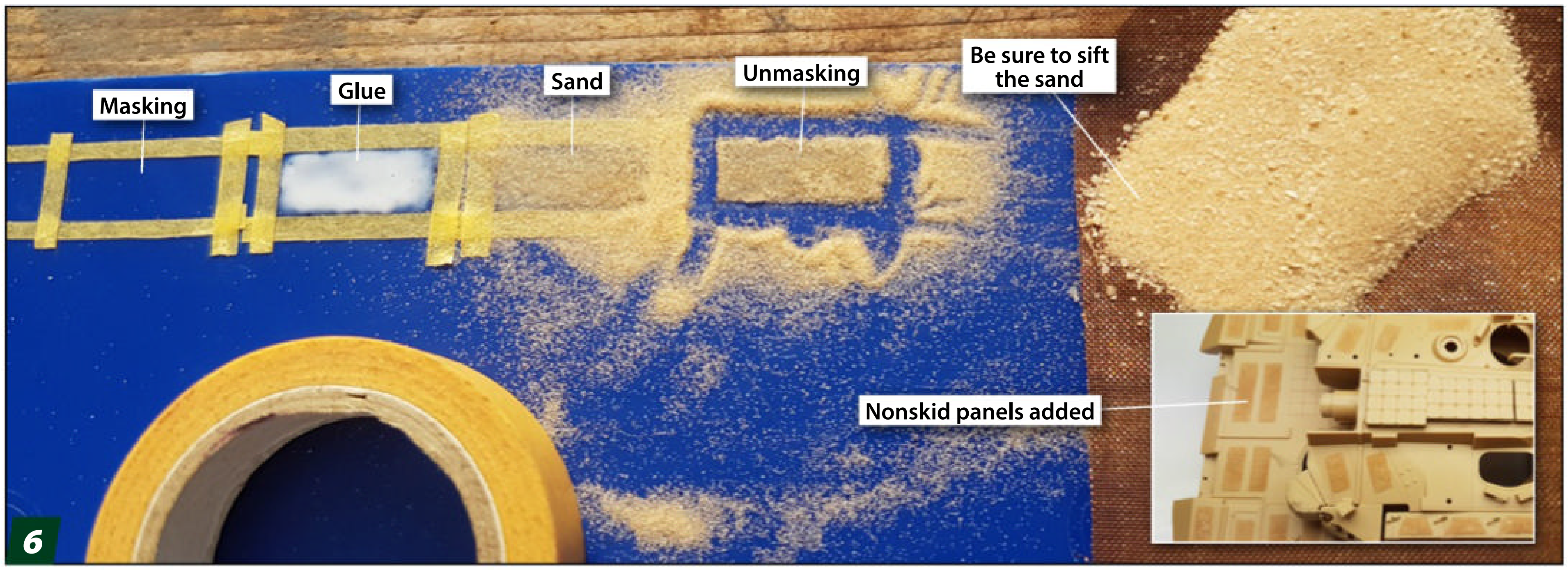
When I checked the fit of the side skirts to the hull, I discovered small gaps at the front. I corrected them with styrene strip and Tamiya putty.



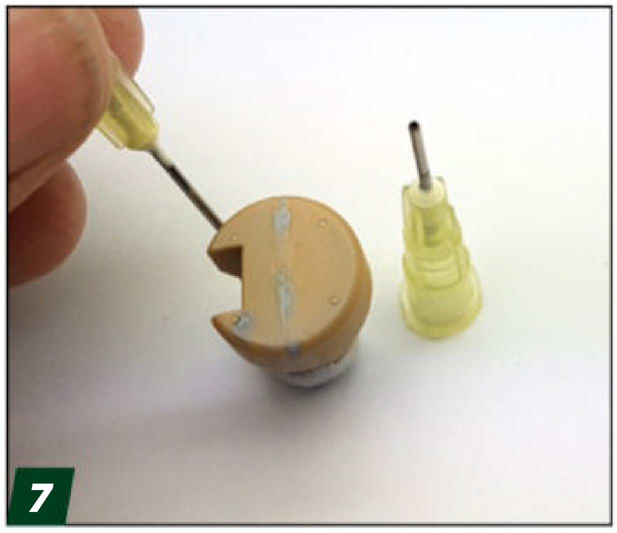
To further improve the side skirts, I deepened the molded separations between the plates with a razor saw and replaced the ugly plastic foot loops near the front with braided wire.



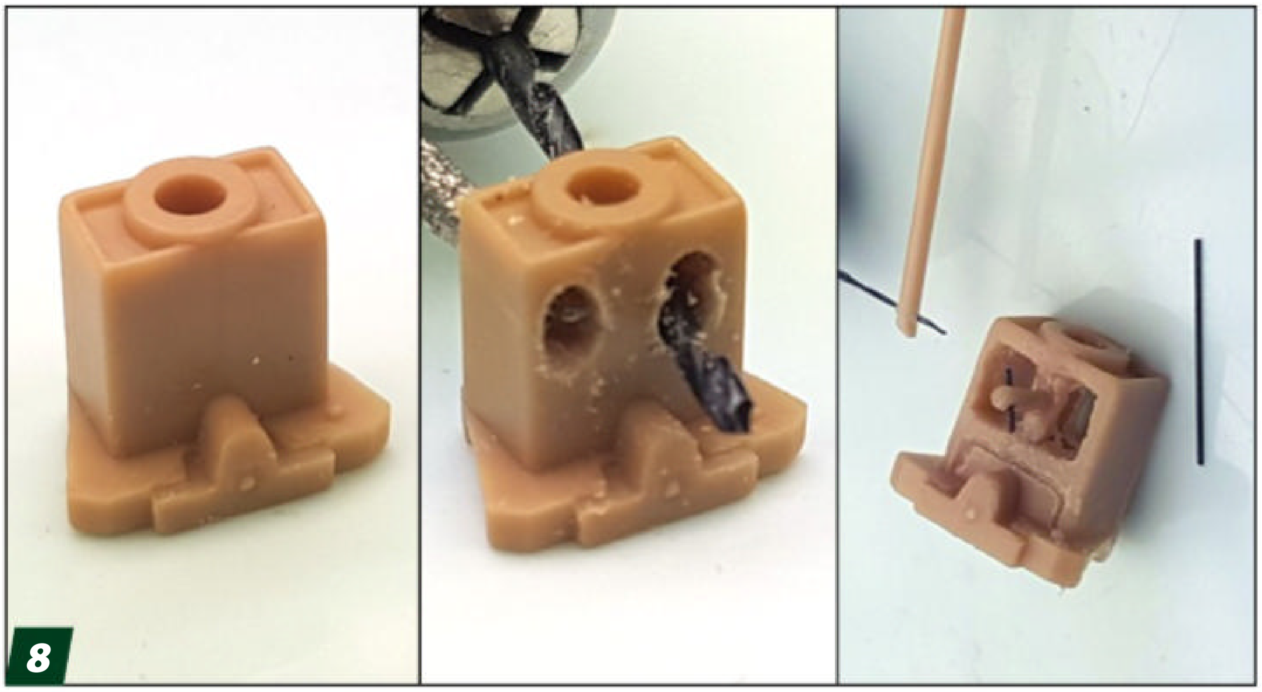
Using several cutting attachments — drill bit, cutting disc, and grinding tips — as well as a scriber and flat file, I removed the engine exhaust vents on the rear panel. They were replaced with PE louvers from MK1.



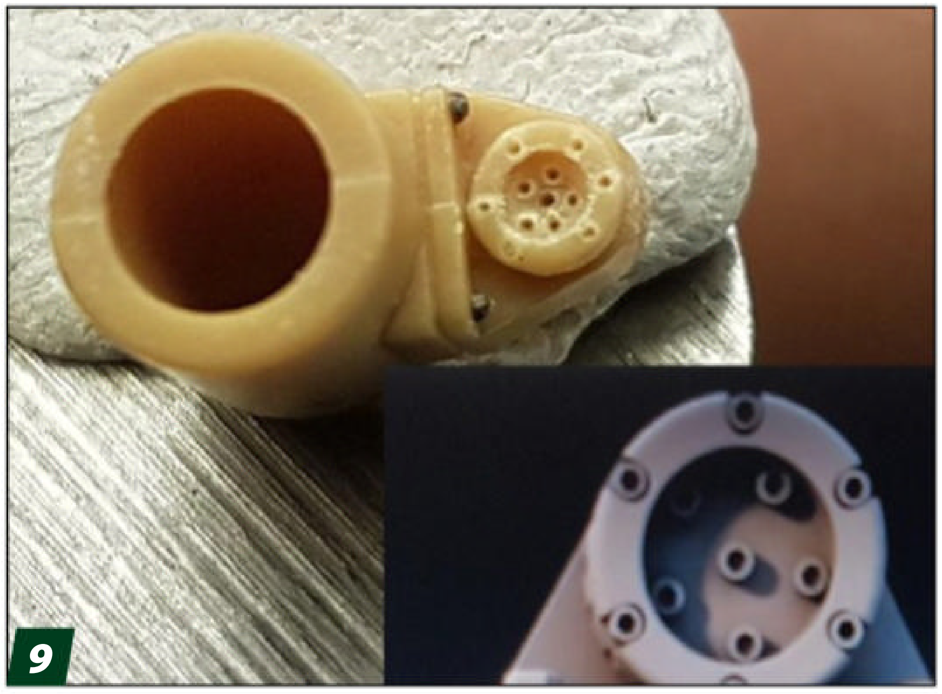
The nonskid texture molded on the upper hull and turret seemed too restrained. To augment the patches, I masked each section, brushed on white glue, and sprinkled on fine, sifted sand I found in the Sahara Desert. I added a few new nonskid panels to places I thought logical such as the stowage containers and glacis. It is a good idea to remove the tape as soon as the glue begins to set.



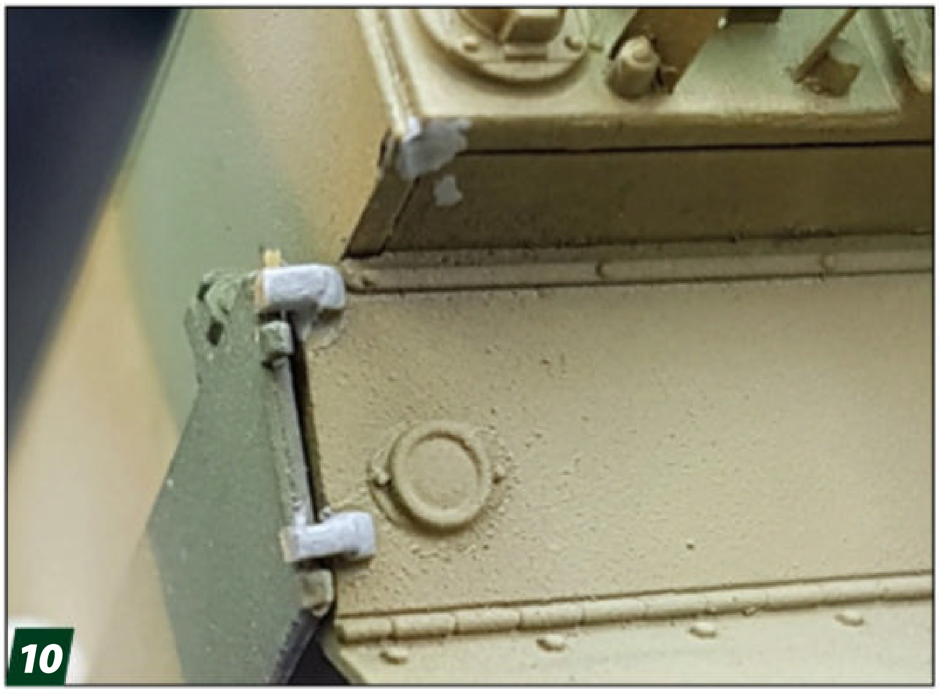
Missing from the top of the housing for the Commander's Independent Thermal Viewer (CITV) are four screw heads. I cut a hypodermic needle of the appropriate diameter and pressed it into the plastic at the locations shown in photos.



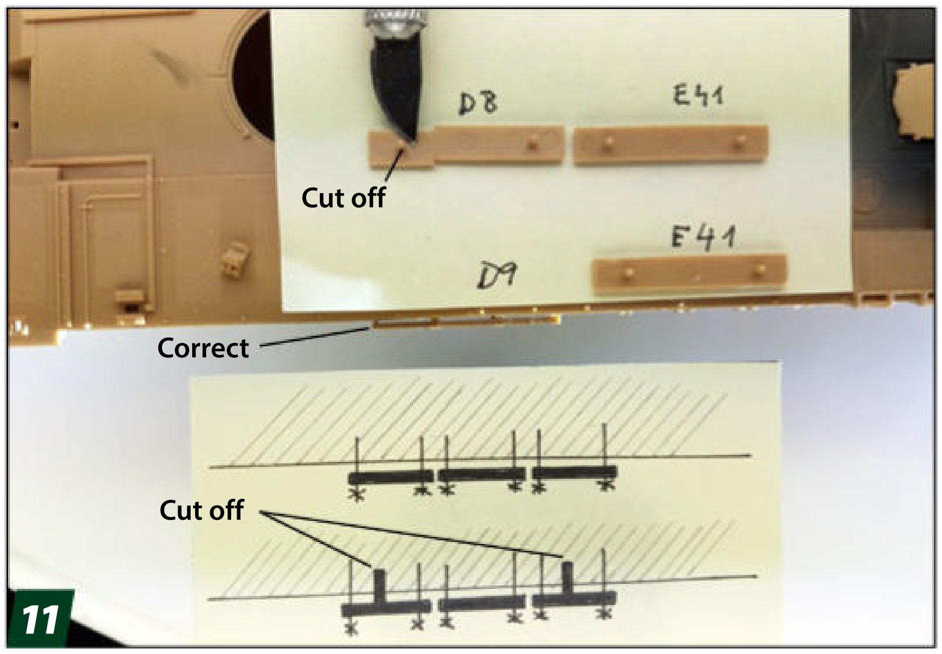
As molded, the mount for commander's machine gun is too simple. I improved the shape with a drill, file, and scriber. Wire and stretched sprue produced an attachment pin.



Using a .4mm bit in a pin vise, I drilled 12 shallow holes in the front of the main gun's muzzle reference sensor (MRS) and added plastic bolt heads to the each corner of its base.

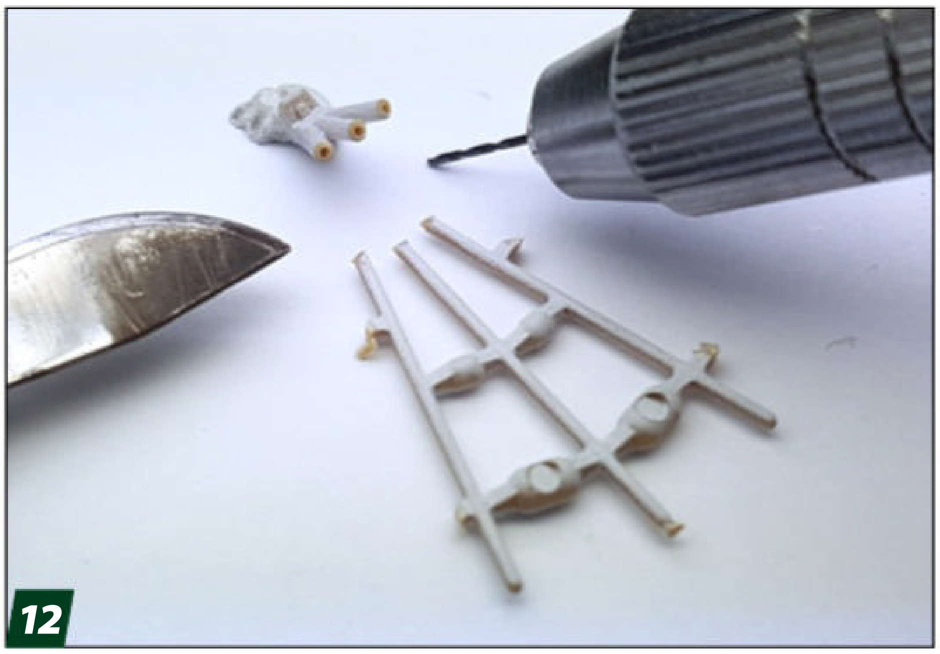


At the tank's rear, the side skirts are secured to the rear panel with a pair of hinged attachments. These are complete on the right side but not on the left, so I made the missing parts from styrene strip.



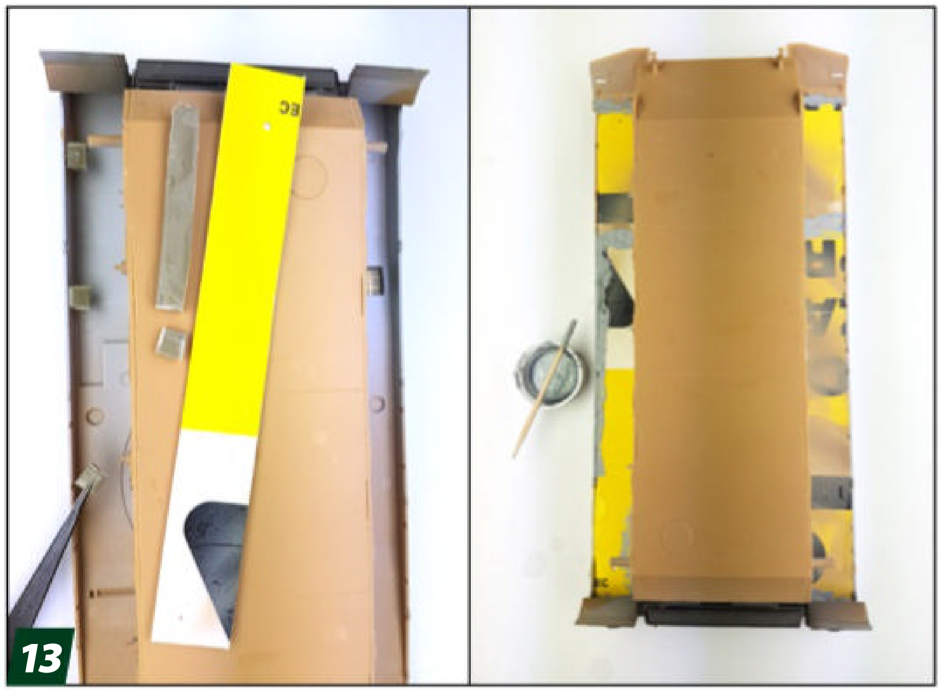
11

The fasteners for the strips of ERA blocks mounted at the top of the skirts (parts D8, D9, and E41) are incorrectly molded as two per strip. Instead, each of the three blocks per strip should have four fasteners. I sliced off the molded pins and replaced them with petite heads.



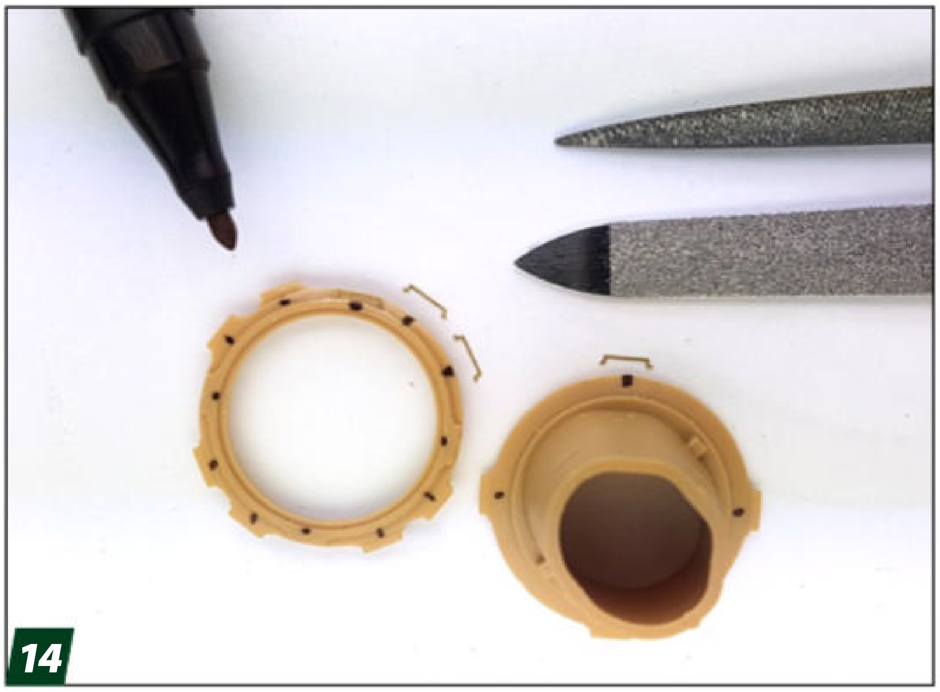
12

The three poles for the signal flags on the turret are clunky. So I cut them off and drilled tiny holes into each base to accept fine metal rod poles. Later I attached a red flag to signal weapons loaded and ready to fire. I also added a Duplicata South Korean flag flying from the antenna.



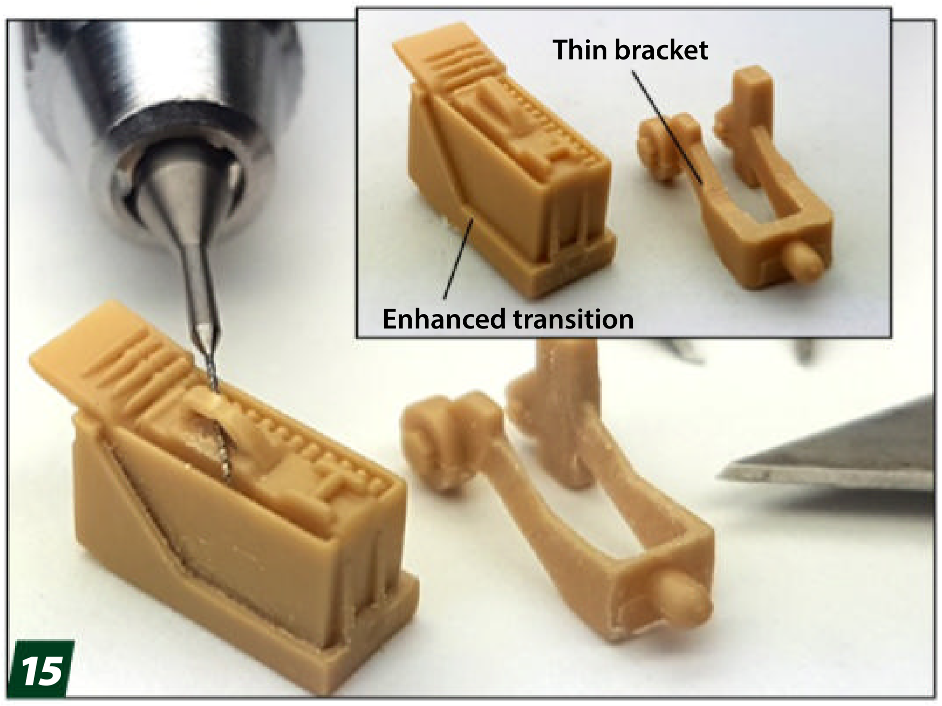
13

When I glued the hull halves together, something strange hit my eyes: The underside of the fenders were open. I filled the voids with 18.5mm wide styrene strips supported by blocks of scrap plastic. Putty smoothed the seams.



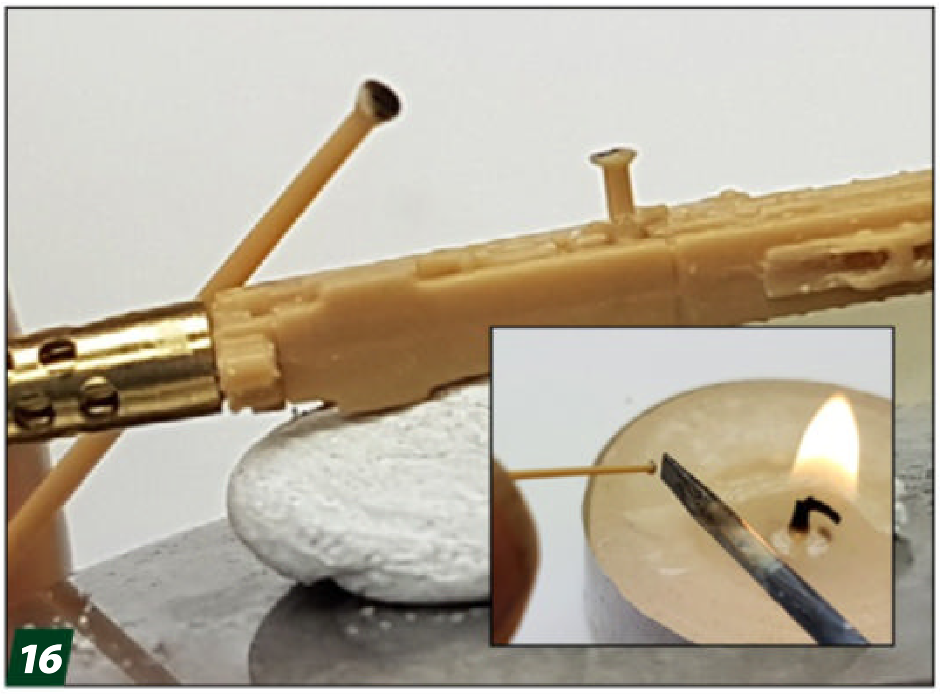
14

Handles around the base of the snorkel are molded as solid tabs. I marked the locations with a pencil, trimmed off the tabs, and replaced them with PE handles. I did the same thing with a door on the right side of the rear hull.



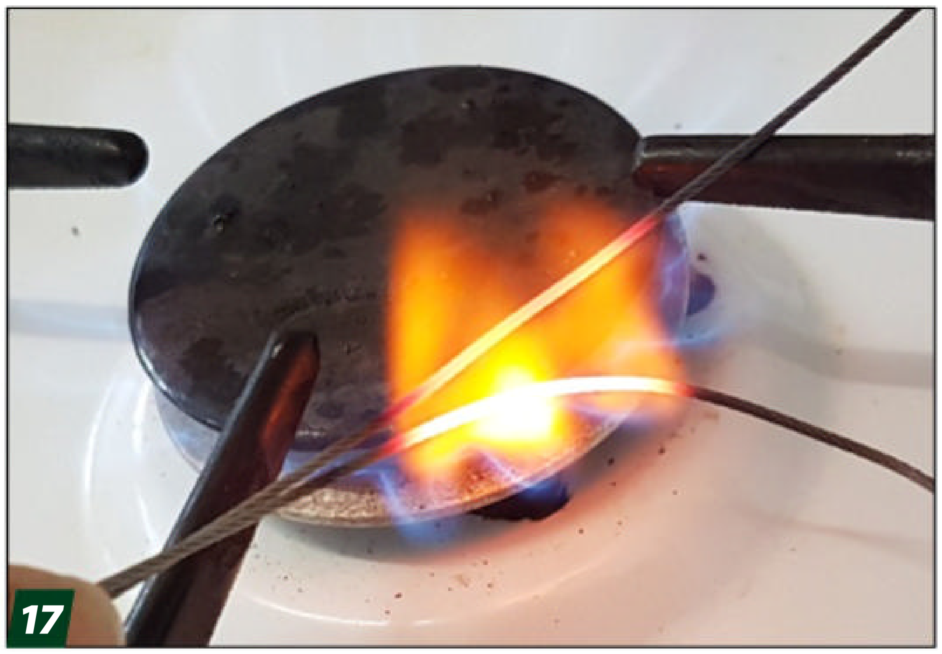
15

I refined the commander's machine gun mount by thinning the bracket the gun fits into and increasing the separation between the ammo box and its cradle by drawing a knife along the transition. Using a fine drill bit, I opened the handle on the cover.



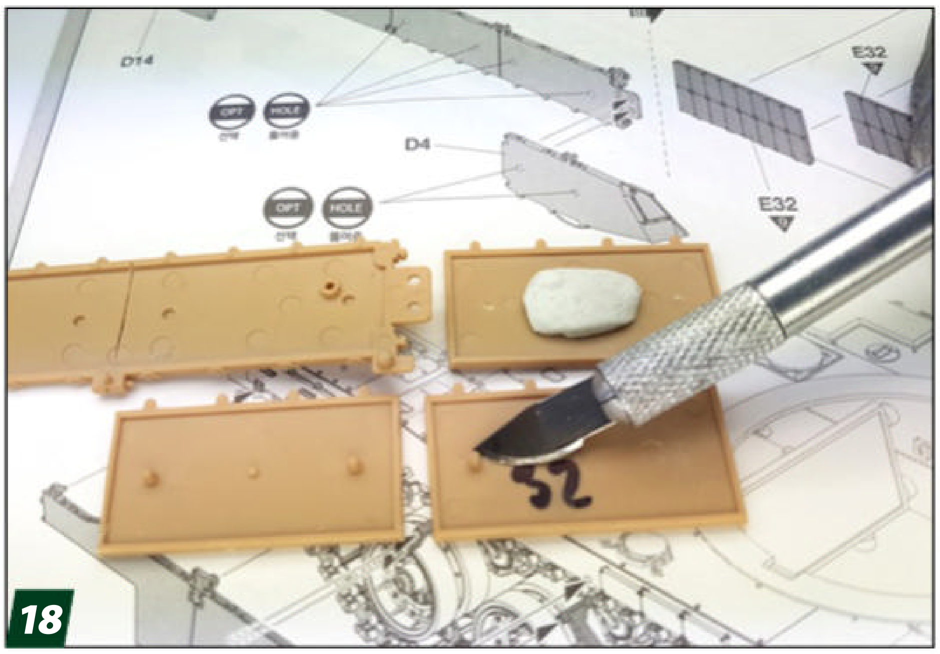
16

To make a charging handle for the gun, I held a piece of sprue the appropriate diameter increasingly close to a hot screwdriver blade until the end mushroomed. Then I trimmed the end and glued it to the side of the M2.



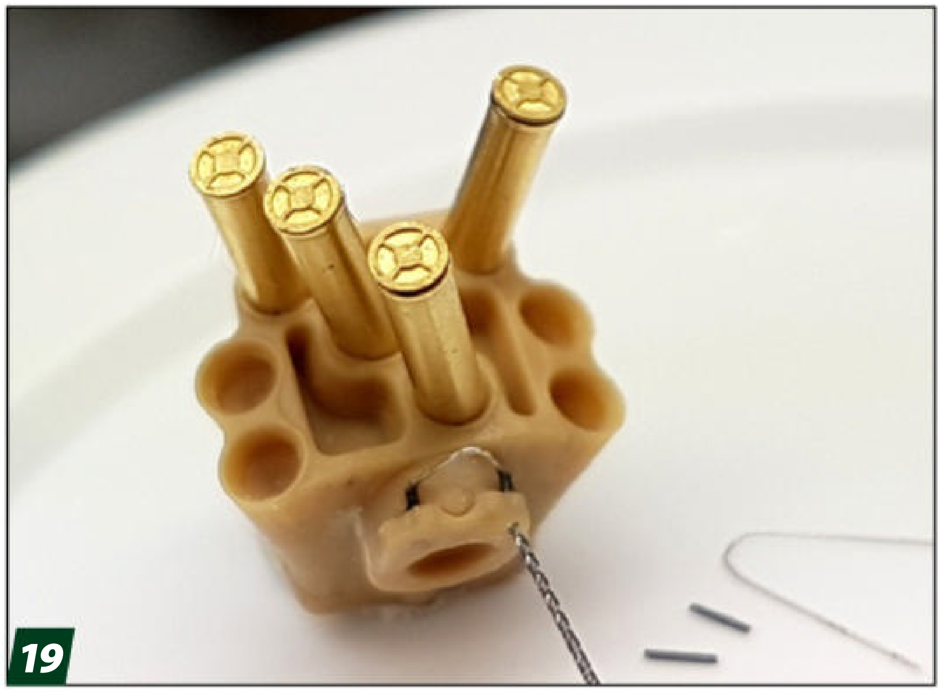
17

I used steel wire for the tow cables, heating it until it glowed red to make it more flexible. The actual cables are wrapped with blue plastic to protect the steel and make them easier to handle, so I soaked the wires in a mix of Tamiya Clear (No. X-22) and a little Clear Blue (No. X-23).


D14
OPT
HOLE
D4
E32
E32
52

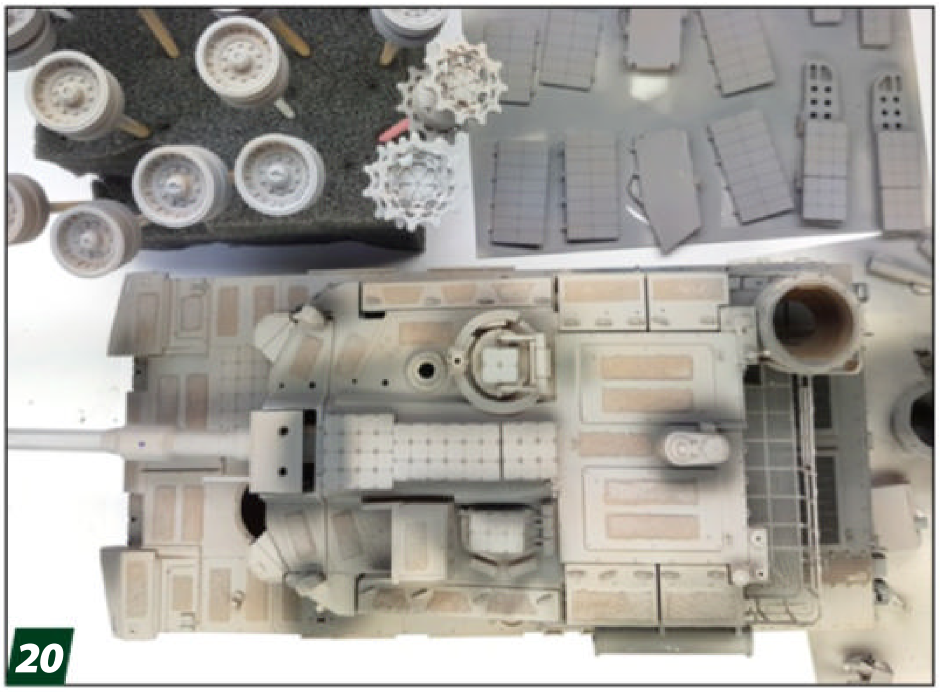
18

Rather than permanently attach the optional ERA panels, I didn't drill the holes on the skirts and cut off the corresponding pins on the add-on armor. Now, I can temporarily attach the ERA with poster putty or leave it off as the whim strikes.



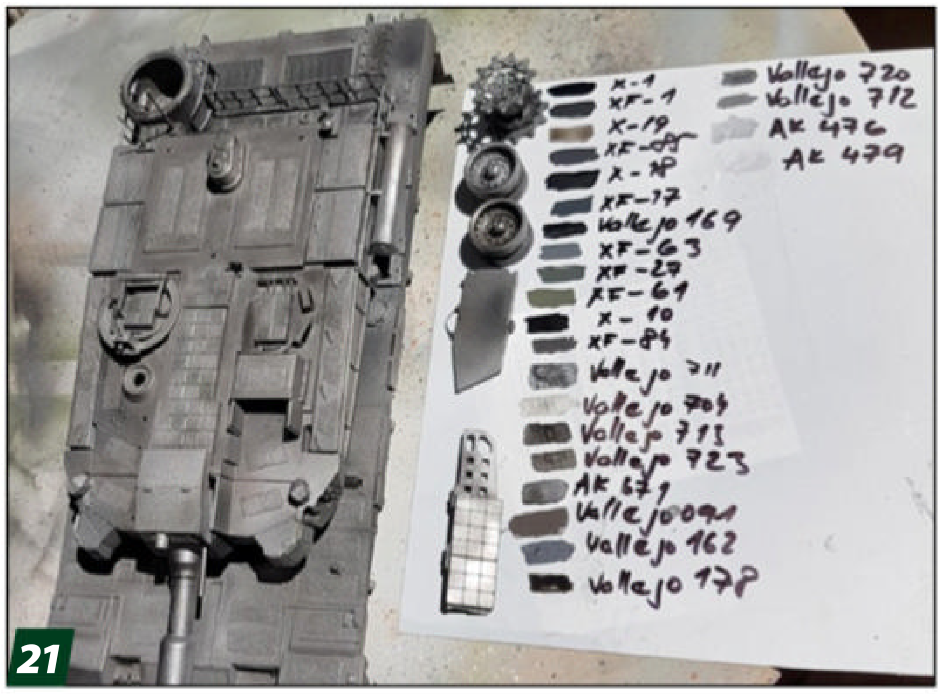
19

Using thin wire and two short solder rods, I added detail omitted from the visual and infrared screening smoke launcher (VIRSS) situated behind the turret hatches.



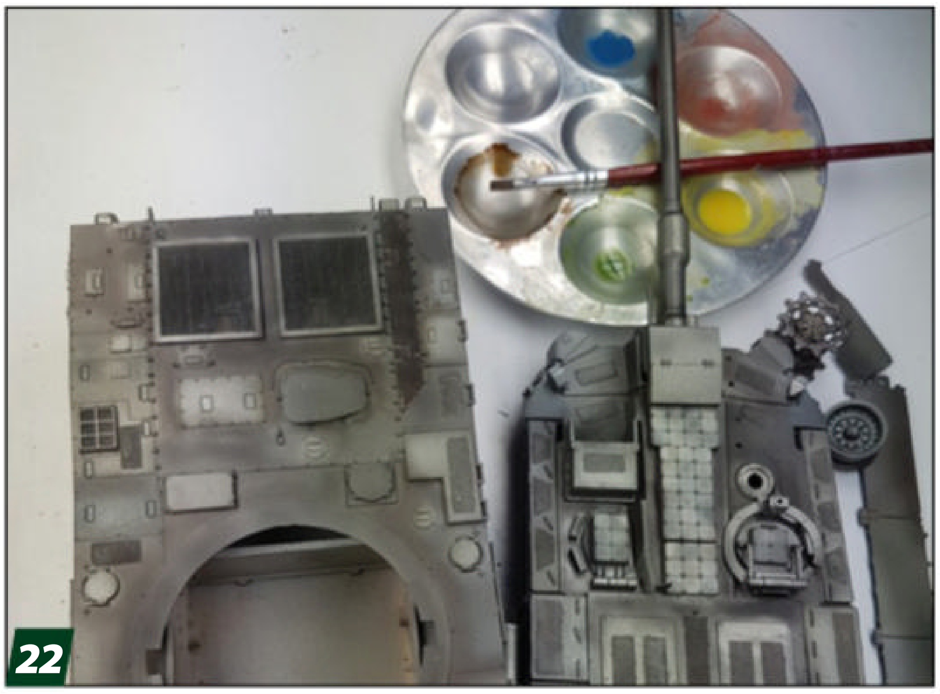
20

Working in subassemblies, I primed the model with Mr. Surfacer 1200. This step ensures the surfaces are problem-free and aids paint adhesion.


X-1
XF-1
X-19
X-18
XF-17
Vallejo 169
XF-63
XF-27
XF-61
X-10
XF-84
Vallejo 711
Vallejo 704
Vallejo 713
Vallejo 723
AK 679
Vallejo 091
Vallejo 162
Vallejo 178
Vallejo 720
Vallejo 712
AK 476
AK 479

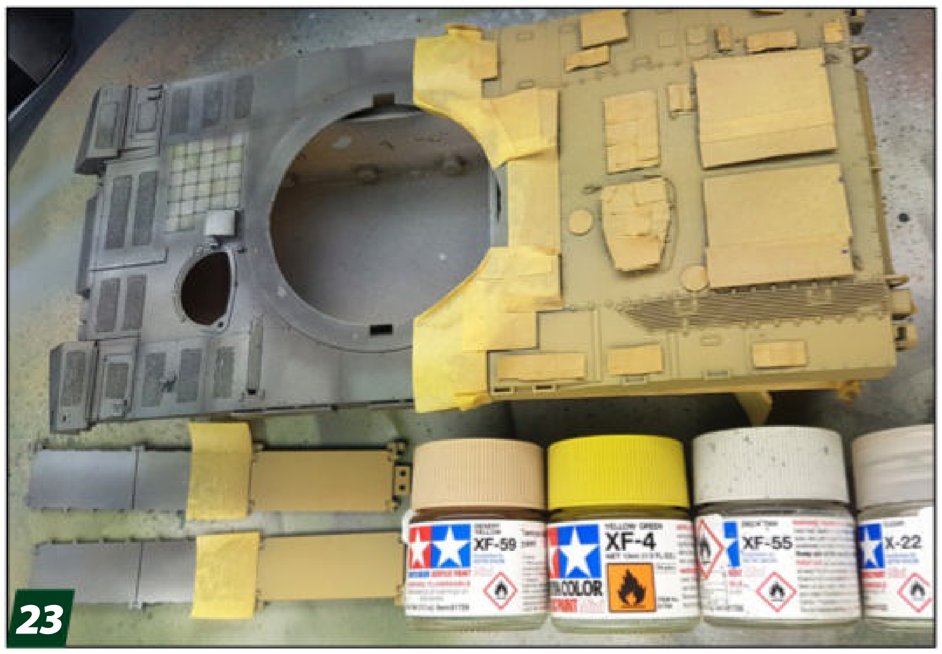
21

Over a base coat of Vallejo Metal Color Steel (No. 77.712), I began tinting and shading various panels with a variety of black, gray, and metallic shades. The chart of color chips helped me decide where each shade should go.



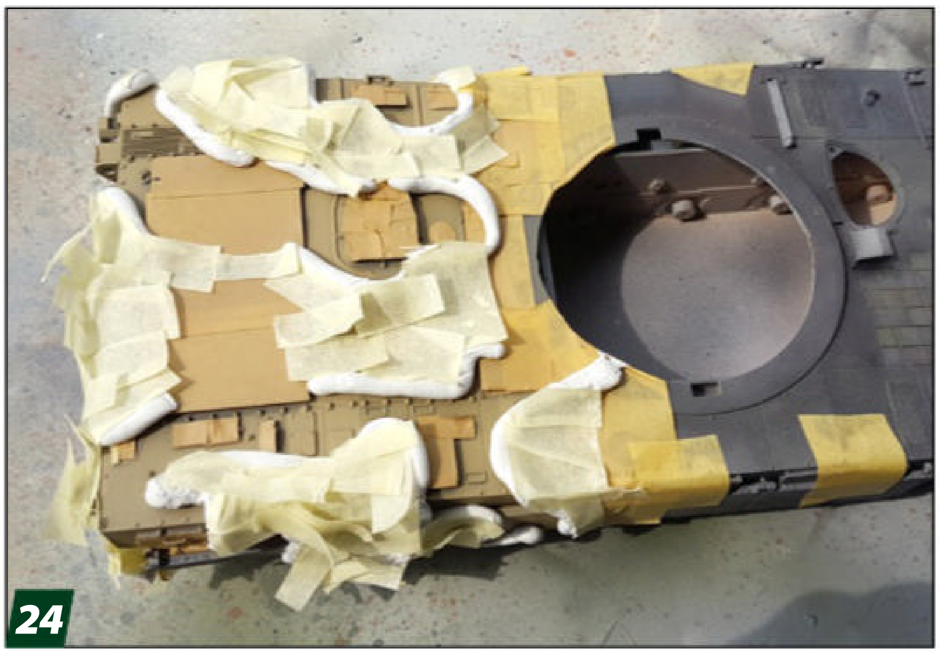
22

Using artist-oil filters mixed with AK Interactive Odorless Thinner (No. AK050), I blended the disparate shades and added subtle variety.



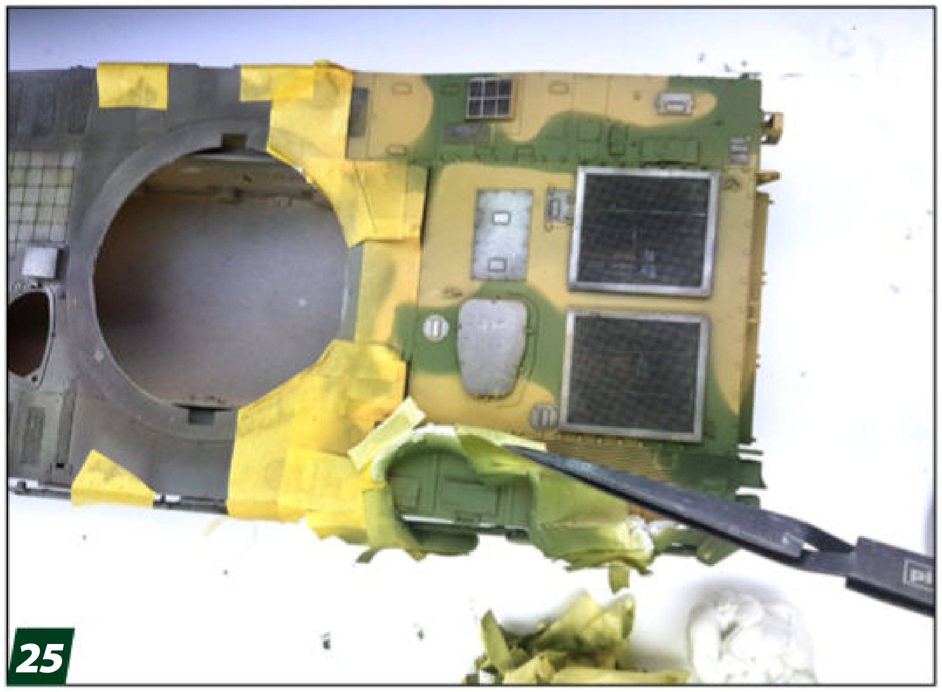
23

After masking the front and some of the grilles, I airbrushed light brown made of Tamiya Desert Yellow (No. XF-59) with drops of Yellow Green (No. XF-4) and Deck Tan (No. XF-55). I added a few drops of clear to each layer, which softened the colors a touch.



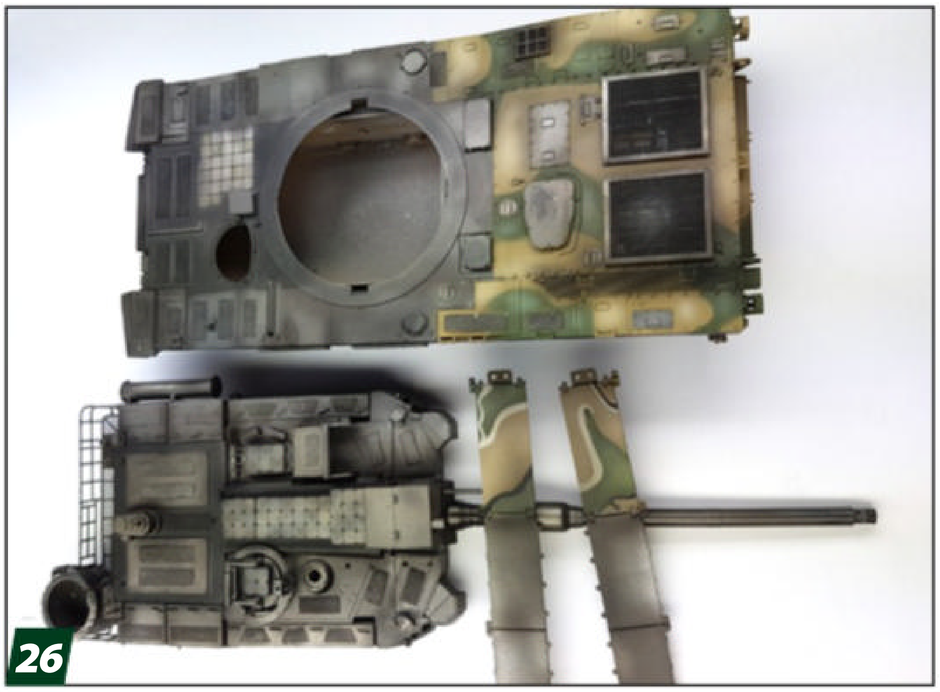
24

I masked each layer with snakes of poster putty backed by Tamiya tape. The putty produces a slightly soft edge to the camouflage pattern.



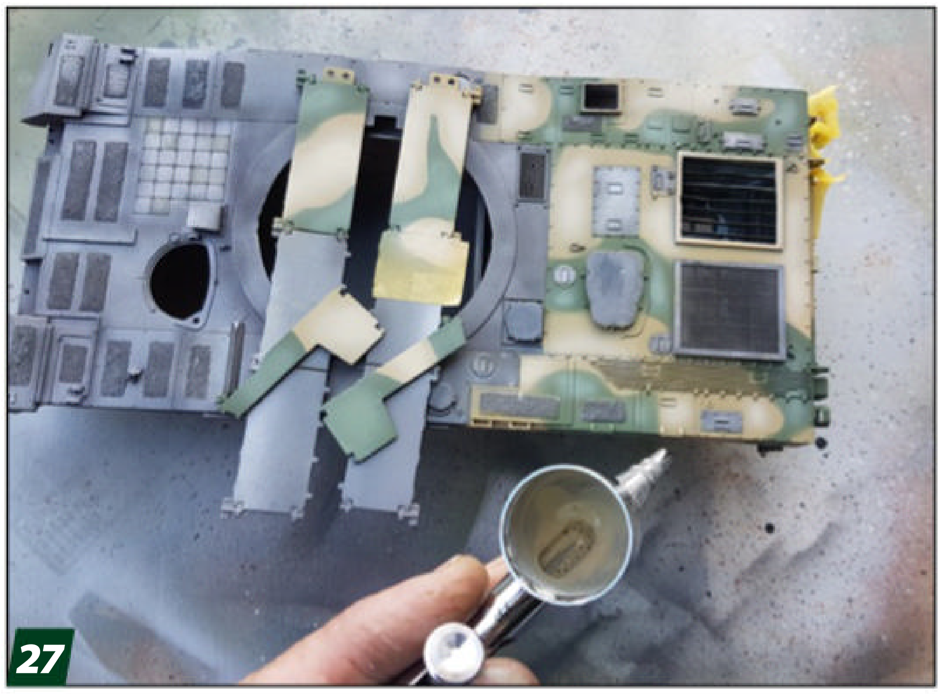
25

For the green, I airbrushed a mix of Tamiya NATO Green (No. XF-67) and drops of Flat Blue (No. XF-8) and Sky (No. XF-21)



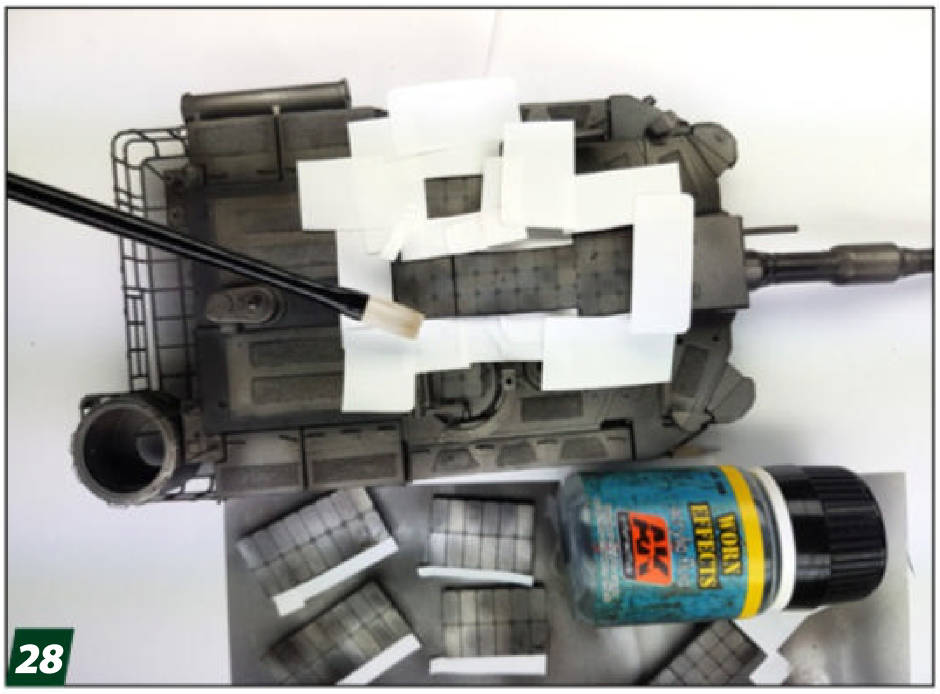
26

The same technique was used with the other two colors. For pale tan, I mixed Tamiya Flat White (No. XF-2) with two drops each of yellow green and deck tan; the black is a mix of Tamiya Flat Black (XF-1) and two drops of flat white.



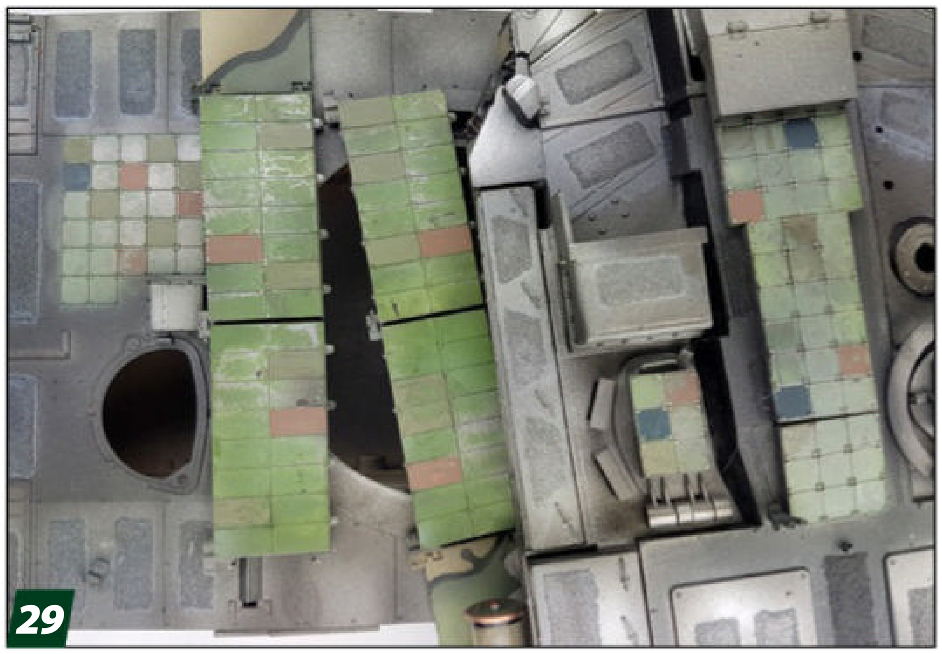
27

With the camouflage on, I post-shaded each section with the original color lightened with a little flat white sprayed into the centers.



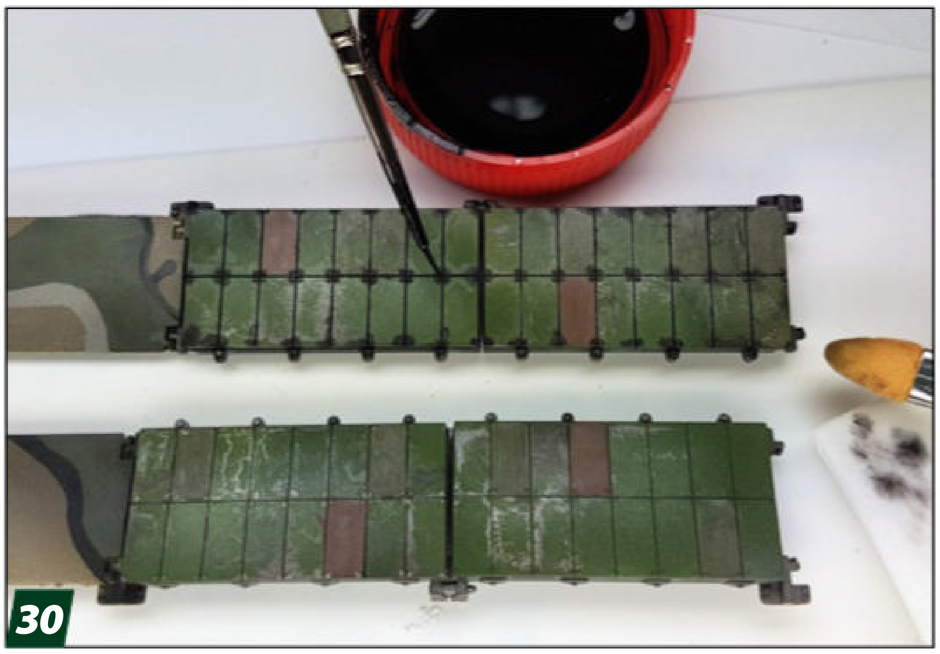
28

As shown in the instructions, the ERA blocks are a monochromatic shade of green. Looking for a little variety, I first brushed the blocks with AK Worn Effects (No. AK088).



29

I airbrushed the ERA on top with a mix of 65% Tamiya Light Sea Grey (No. XF-25) and 35% Flat Green (No. XF-5), the hull and turret sides were painted flat green with a little white. I picked out bricks with Olive Drab (No. XF-62), NATO Brown (No. XF-68), and German Grey (No. XF-63).



30

After applying the decals, it was time for a wash of black artist oils mixed with a little red and brown. Working a section at a time, I brushed clean turpentine onto the area before applying a little of the oil paint and blending it with a brush soaked in turpentine.

FINAL THOUGHTS

WITH THAT DONE, I brought the subassemblies together and my unique K2 Black Panther was ready for action. I spent nine months on this build, much of that researching details to make a more accurate model. I am very content to have dared this construction. Sure, there were some ups and downs to be overcome, but I think these are the challenges that make our hobby so outstanding. **FSM**

By Tim Boyd

JoHan ’69 and ’70 Plymouth Road Runner

Rare kits that demand top rates

In today’s model car world, some of the hardest-to-find and most valuable treasures are the late 1960s and early 1970s JoHan kits. Two of these kits are the 1969 and 1970 Plymouth Road Runner annuals.

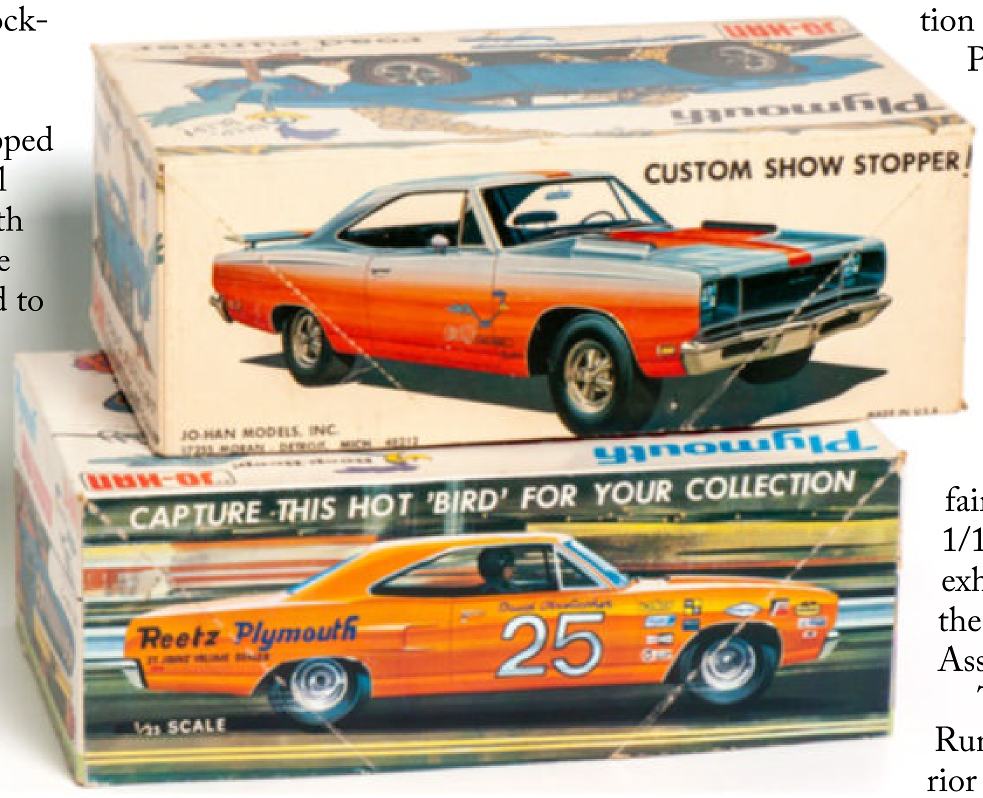
There are two facts you need to know about these kits and their high values: First, JoHan, as a company, no longer exists and nearly all the kit tooling bank has disappeared. Second, most JoHan annual kits were never reissued in their original form; those that were re-released were often altered in ways that compromised their authenticity. Both of these factors make JoHan’s original Road Runner annual kits precious jewels.

When Plymouth’s Road Runner was introduced for the 1968 model year, its blockbuster appeal was underestimated by Plymouth Division, but also in the model car industry where no one stepped up to do an annual kit or promotional model. By the spring of 1968, and with the 1/1 scale Road Runner selling like crazy, JoHan filled the gap and agreed to produce an annual kit of the little-changed 1969 model year.

JoHan’s kit was typical of its mid- and late-1960s design efforts. That included a pristine and highly accurate body, three well-differentiated building versions (showroom stock, custom show car, and NASCAR), and an uber-simplified dealer promotional-style chassis plate with axle locating tabs being the only additional parts.

JOHAN 1969 AND 1970 PLYMOUTH ROAD RUNNER ANNUAL KITS

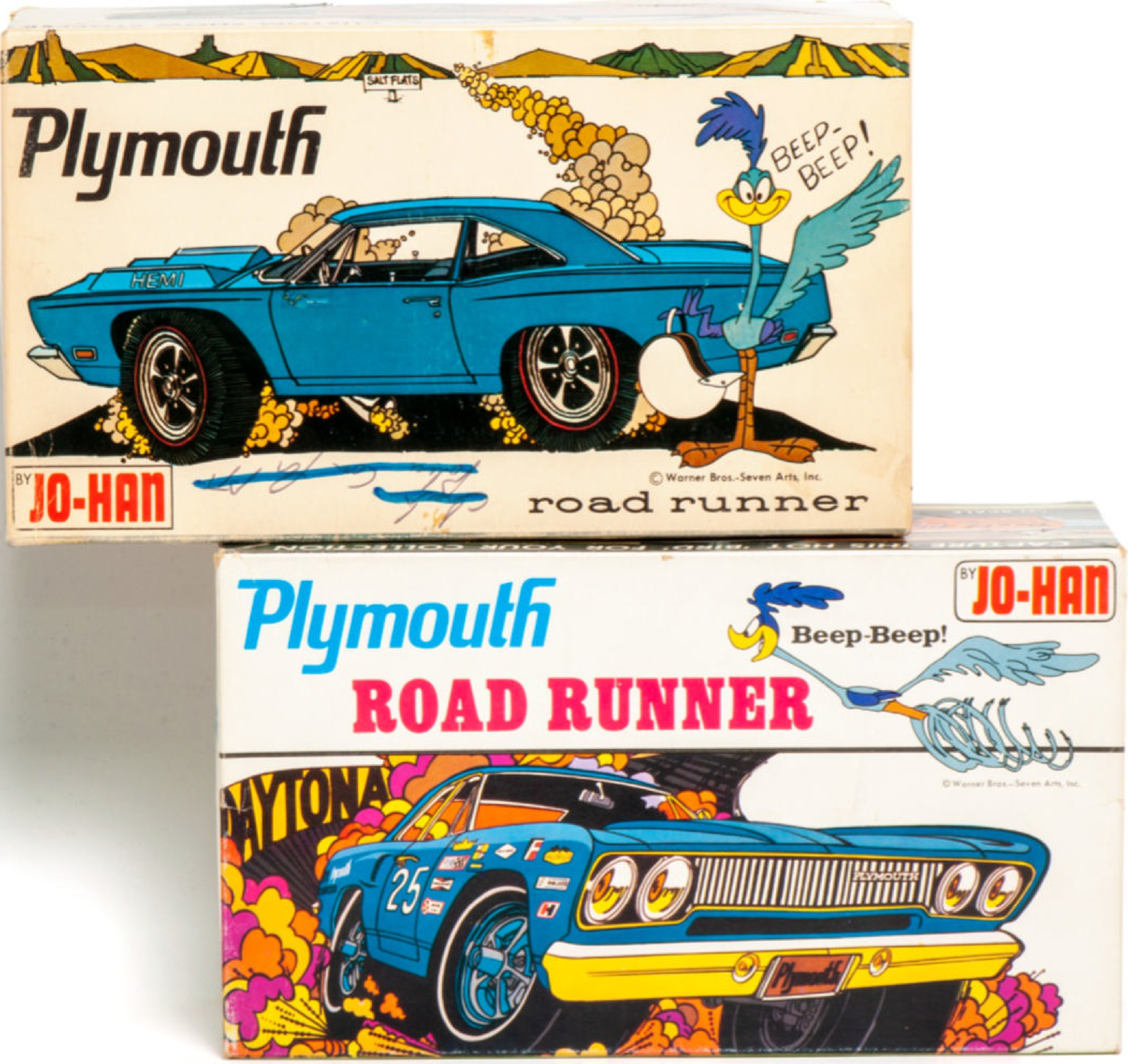
Kit Nos.: C-1669:200 and C-1470:200
Introduced: 1969 and 1970, respectively; never reissued in original forms
Present Value: $150 and $250, respectively



From today’s perspective, you’ll find several premium features versus some other late 1960s annual kits, including separately molded clear headlight lenses for the showroom version, separately molded bucket seat headrests, and the factory-installed air-intake ducting for the 426 Hemi engine. Both wheel sets — the factory stock “Magnum 500” Road Wheels and the optional Cragar S/S wheels — were beautifully rendered. Notably, JoHan’s Road Wheels actually replicated the more desirable 1968 and earlier Mopar design with fully chromed rims rather than the far more commonly seen (in scale kits) 1969 and later versions with polished trim rings.

JoHan referred to the competition building option as “Richard Petty’s” with his prominent No. 43 livery repeated on the box art and decal sheet. Of course, this was totally fictitious because 1969 was the year Petty switched to driving a Ford Torino. On the box, opposite the stock car, was the “Custom Show Stopper” build version, which was a fairly accurate replication of the 1/1 scale Road Runner Probe exhibition car seen that year on the International Show Car Association circuit.

The 1/1 scale 1970 Road Runner featured a major exterior freshening with new front



and rear quarter panels and a revised front and rear end. The changes were so extensive that JoHan tooled an entirely new body rather than modifying the 1969 kit's tooling. The company updated the kit interior with new high-back bucket seats, revised sew patterns on the seating and door panels, and the new Rallye Instrument Cluster. Also updated were the real car's redesigned air cleaner and air ducting components.

The kit contained a highly detailed racing version that included a comprehensive seven-piece roll cage and a rear axle cooler, but all box art and instruction references to Petty disappeared.

Both JoHan kits featured box top and end panel illustrations lifted straight from Plymouth's print advertising and brochures. The wildly exaggerated images perfectly captured the outrageous nature of the muscle-car wars and added to the appeal overall.

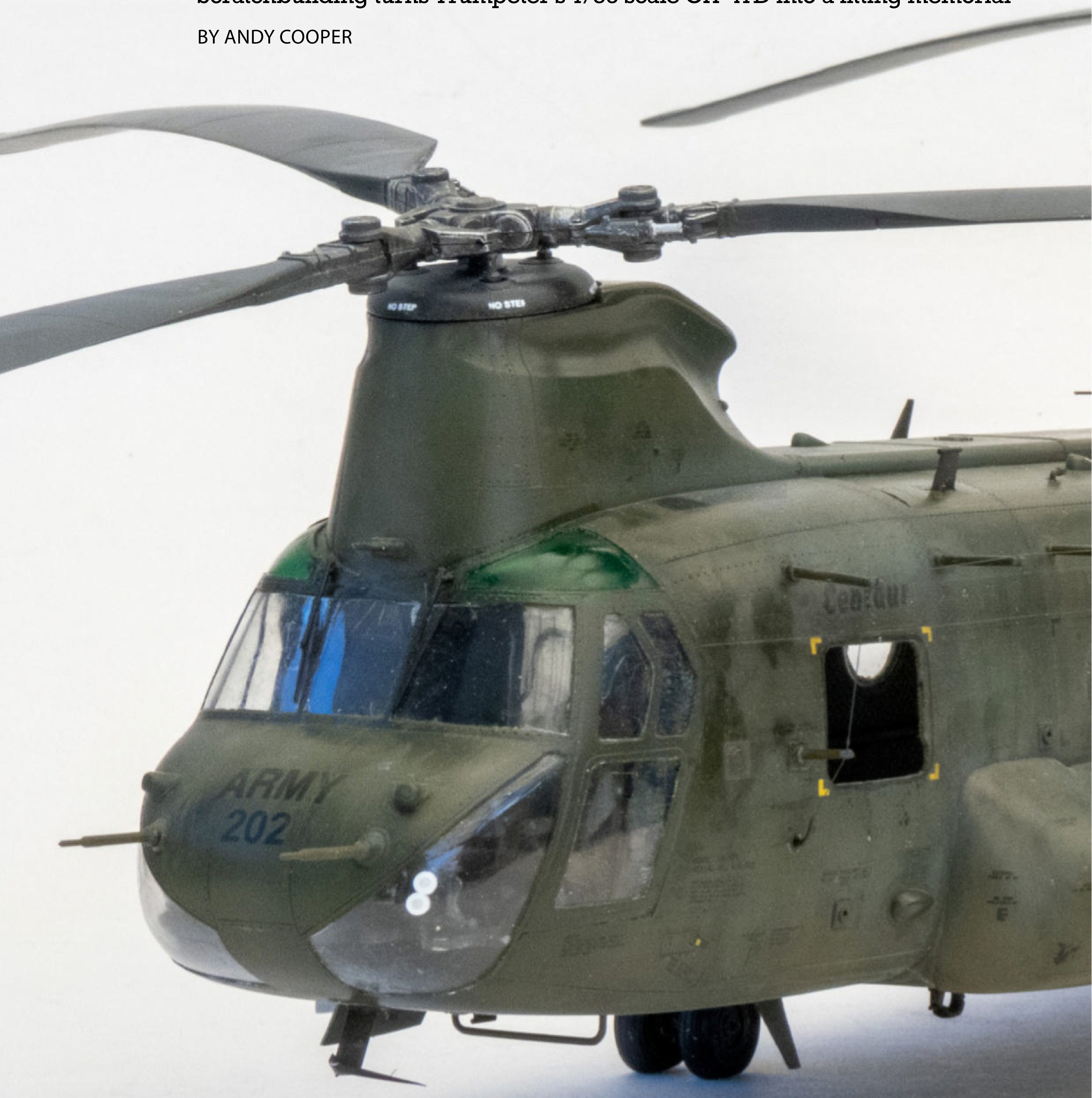
Neither kit has been reissued in these exact forms. The 1970 tool was irrevocably modified into a Plymouth Superbird replica for Richard Petty NASCAR and Sox and Martin race car kits. The 1969 Road Runner subsequently saw a number of reissue production runs over the next two decades, but with changes including a reduced number of plated parts (no more Cragar S/S wheels), omission of the engraved Plymouth deck lid nameplate, incorrect 1970 Road Runner high-back buckets and door panel engraving, and a revised, much smaller decal sheet. As time went on, these reissues also suffered from increased tooling wear and degradation of quality.

Add all the above together, and you get two rare, highly desirable annual kits that justifiably command a premium price in today's kit collector market. **FSM**

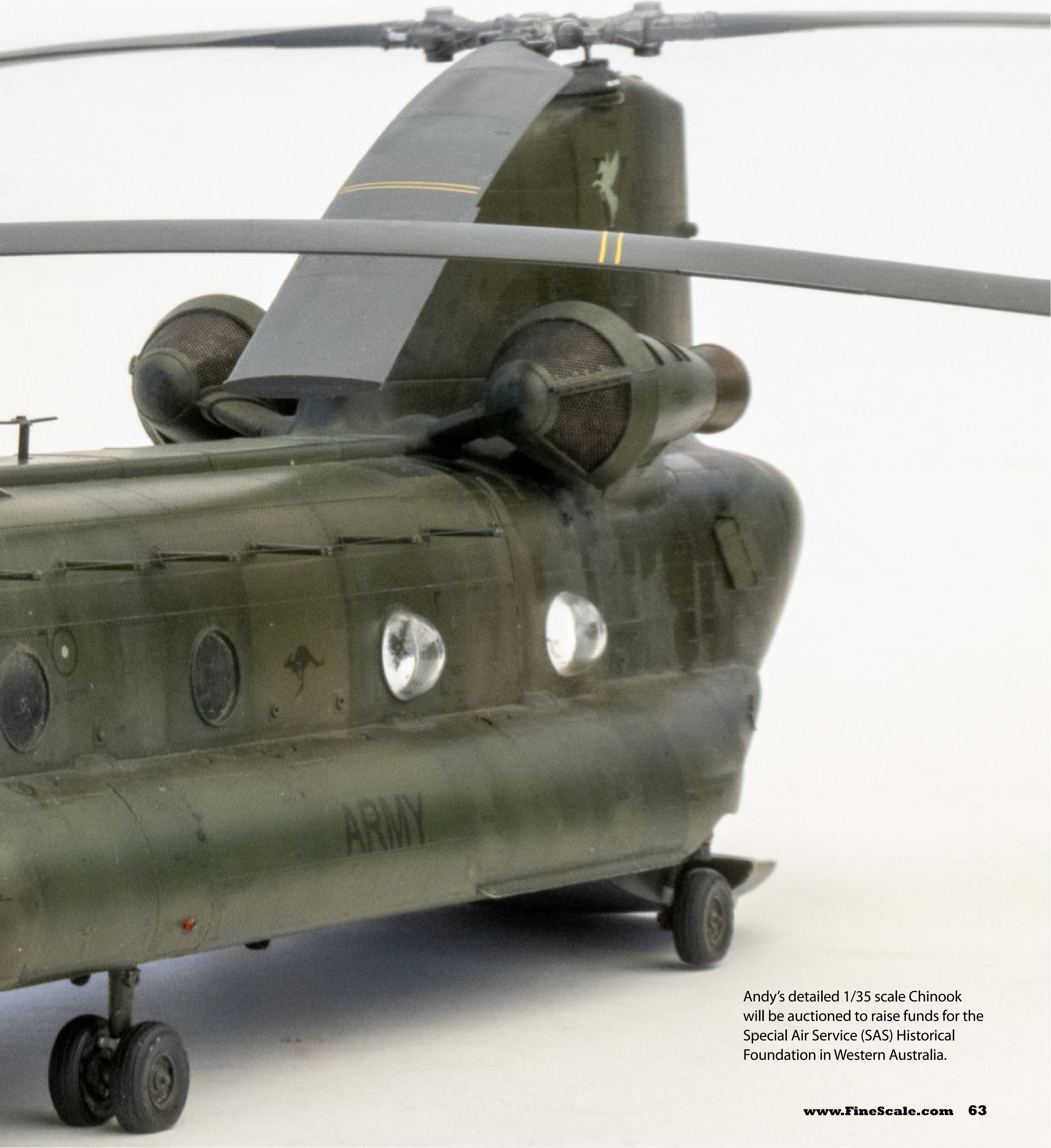
Detail a big

Scratchbuilding turns Trumpeter's 1/35 scale CH-47D into a fitting memorial

BY ANDY COOPER


NO STEP
NO STEP
ARMY
202

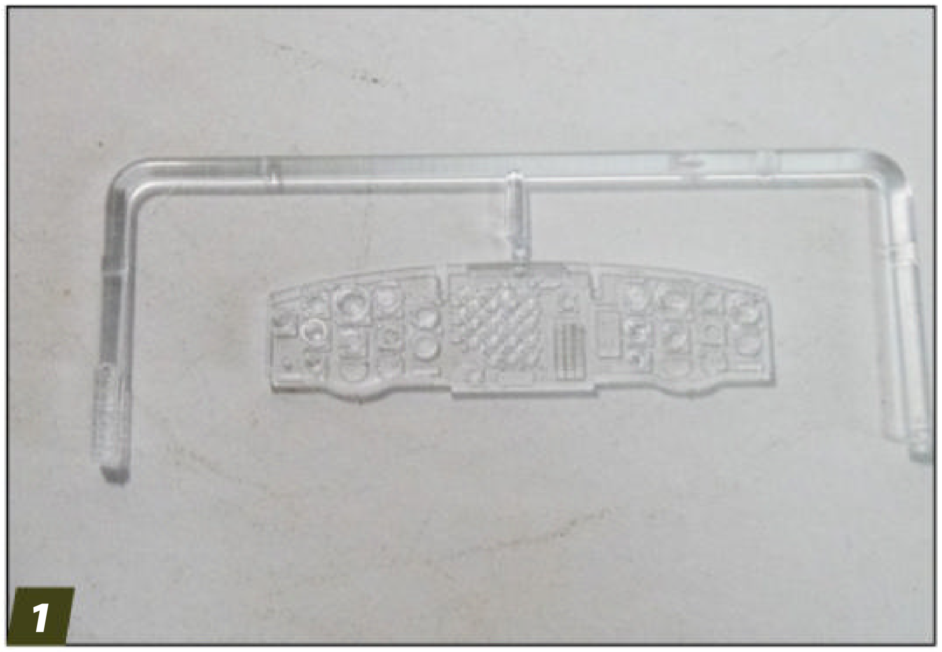
CHINOOK



Andy's detailed 1/35 scale Chinook will be auctioned to raise funds for the Special Air Service (SAS) Historical Foundation in Western Australia.

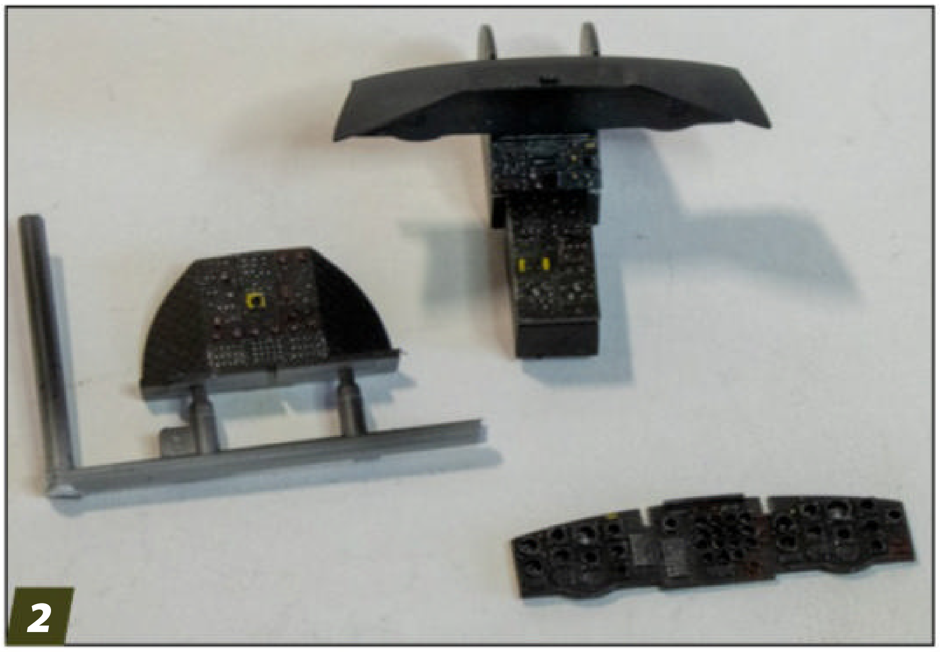
Inspired by photos of an CH-47D being delivered to the Australian War Memorial in Canberra, the Australian capital, I pulled a Trumpeter 1/35 scale Chinook from my stash. The donated Australian Army aircraft, A15-202, carried the name *Centaur* and had a pinup sticker emblazoned with *Good as Gold* on the starboard sponson. While I was working on it, information about its service in Afghanistan prompted me to contact the Special Air Service (SAS) Historical Foundation in Perth, Western Australia. I offered to donate the completed model, a proposal the Foundation gladly accepted.

In 1/35 scale, a Chinook is a big model with a fuselage that is almost 18 inches long and a pair of rotors that are each 18 inches in diameter. The Trumpeter CH-47 is well molded and engineered, but it lacks detail. The ramp area has only the most rudimentary framework molded on, and there are no seats or webbing that should be visible through the windows. Some Chinooks were stripped out to allow for mission requirements, so I modeled mine as such to avoid dealing with the lack of seats.



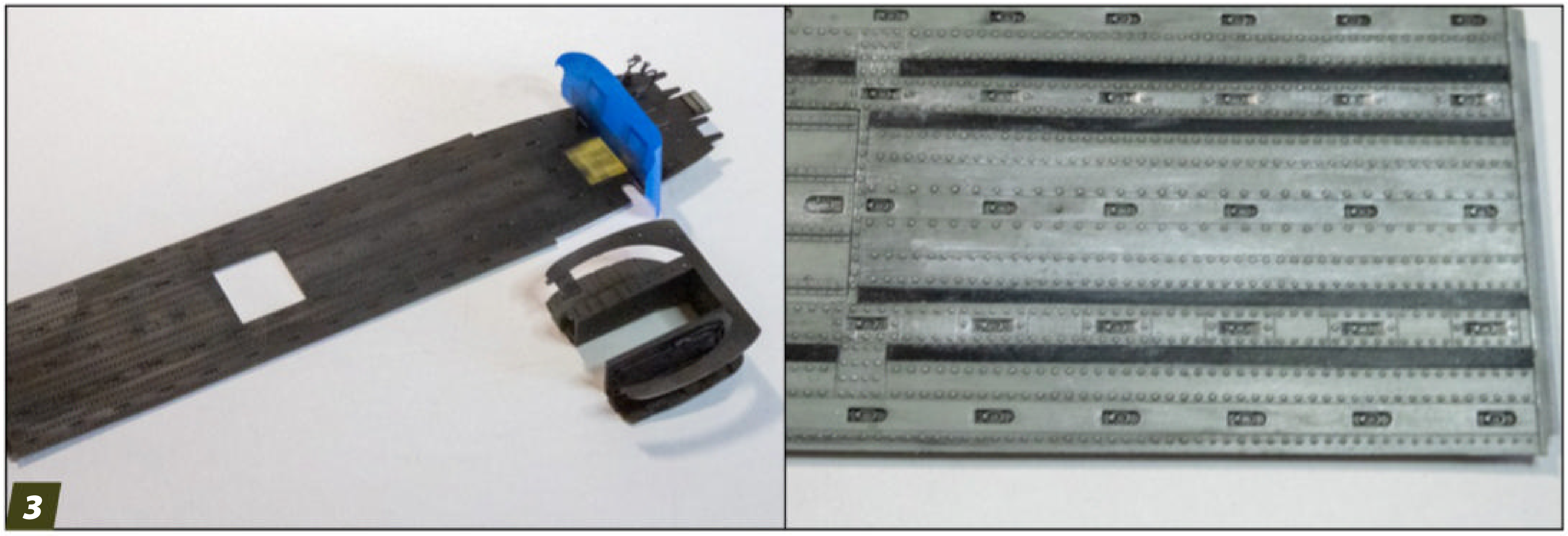
1

The main instrument panel is molded as a clear part with a piece of printed film that attaches behind for the dials. To avoid masking every instrument before spraying the panel black, I drilled each face with appropriately sized bits before painting.



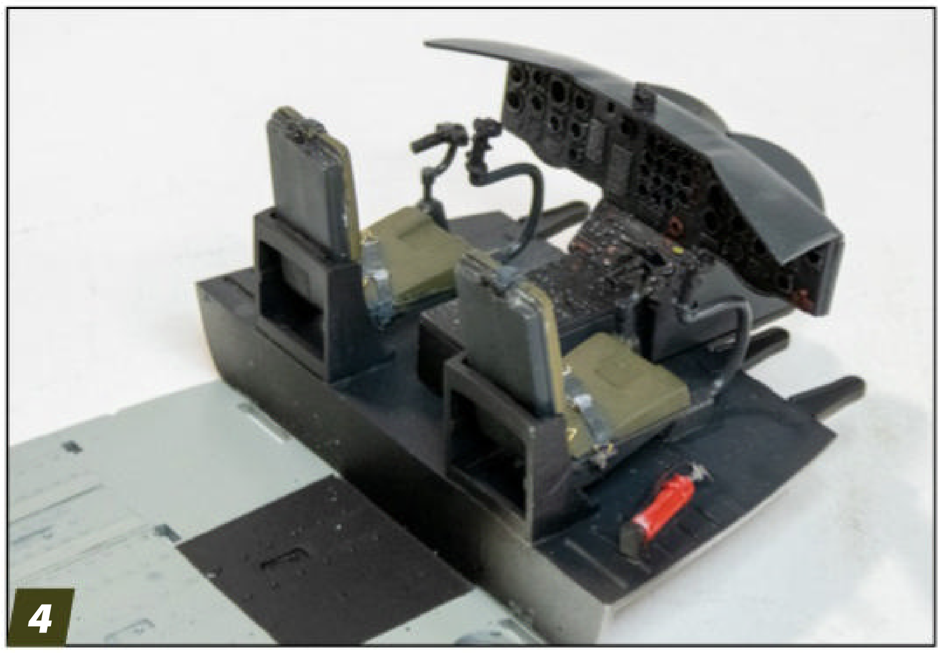
2

Once the paint was dry, I attached the film behind it and finished painting other details on the panel. The center and overhead consoles have molded details that look the part after careful painting and dry-brushing.



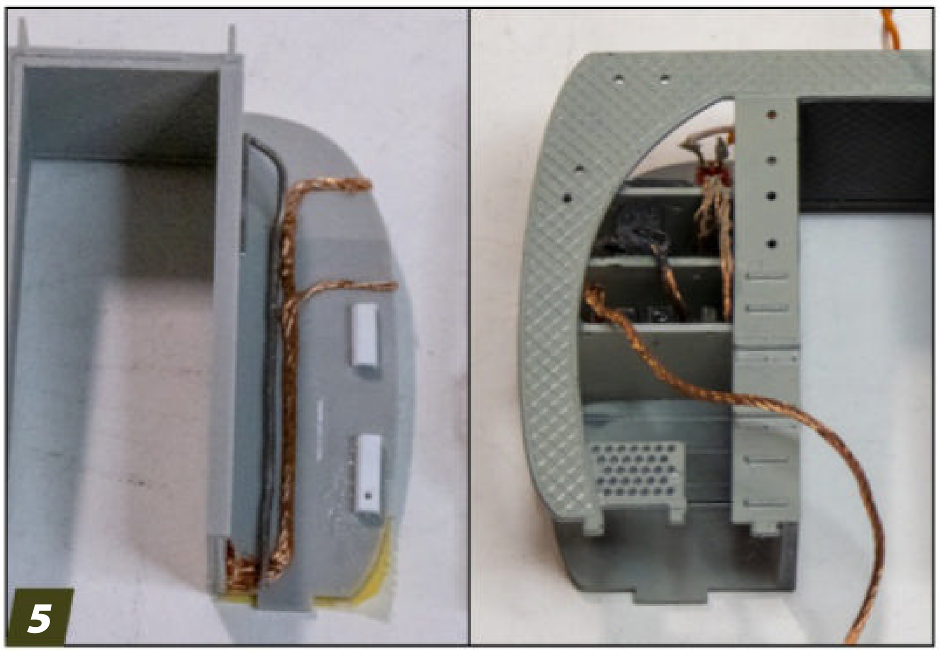
3

Photos show Chinook cockpits to be overall black, not aircraft gray as called out in the instructions. I sprayed the flight deck and cargo floor with black primer, then masked the grip strips on the cargo-bay floor and airbrushed Hobby Color Aircraft Gray (No. H57).



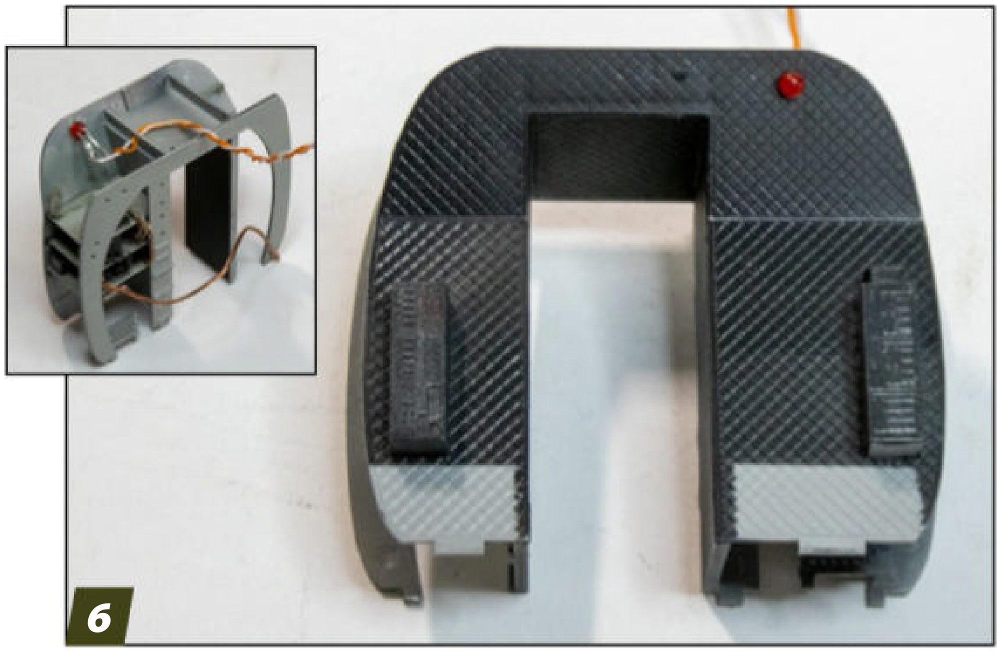
4

I painted the pilots' seat cushions olive drab and the kit's photo-etched metal (PE) seat belts with Tamiya Field Blue (No. XF-50). The red extinguisher adds color. After a raw umber wash, I dry-brushed the features with slightly lighter shades; aluminum added wear to the floor.



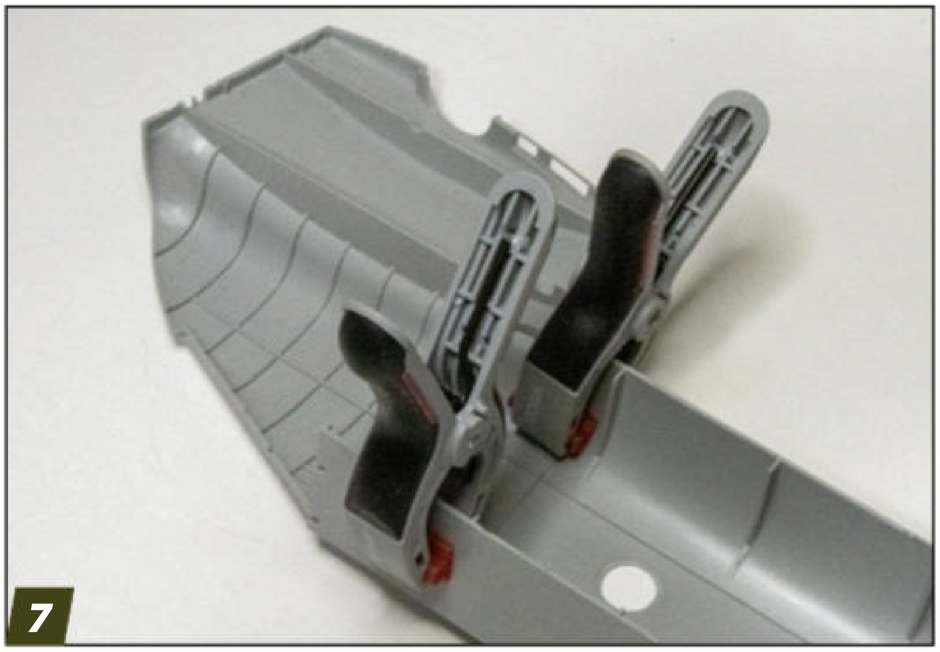
5

Avionics and equipment bays sit between the cockpit and the cargo area. I embellished the kit parts with bits of styrene and copper wire. The bays were painted aircraft gray and the equipment picked out with dark gray and black; washes and dry-brushing highlighted detail.



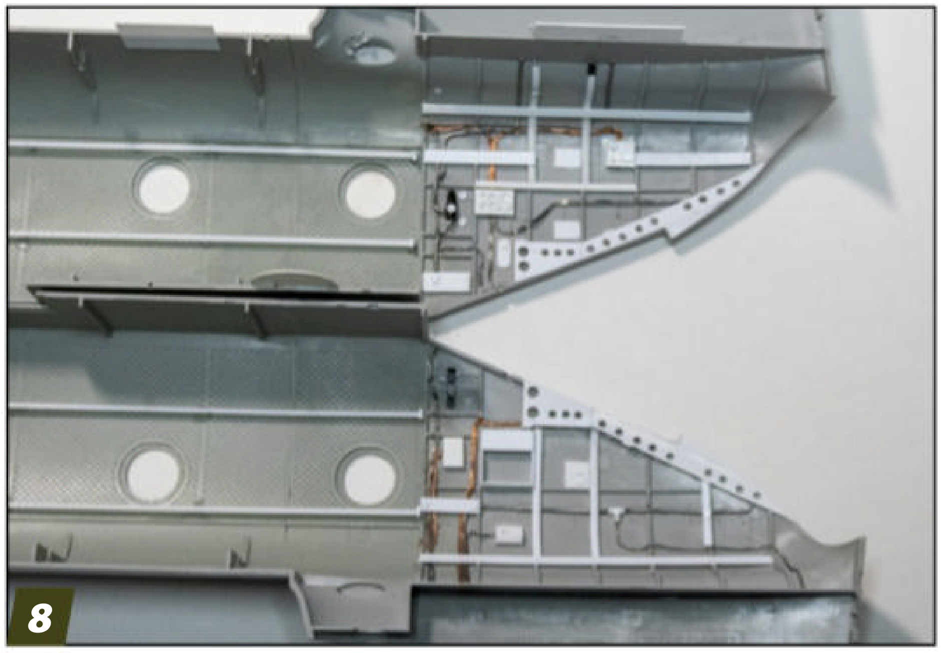
6

To help show off the details, I added red LEDs to the interior. One illuminates the cockpit. I airbrushed the rear wall black before gluing the LED into a hole drilled into the bulkhead.



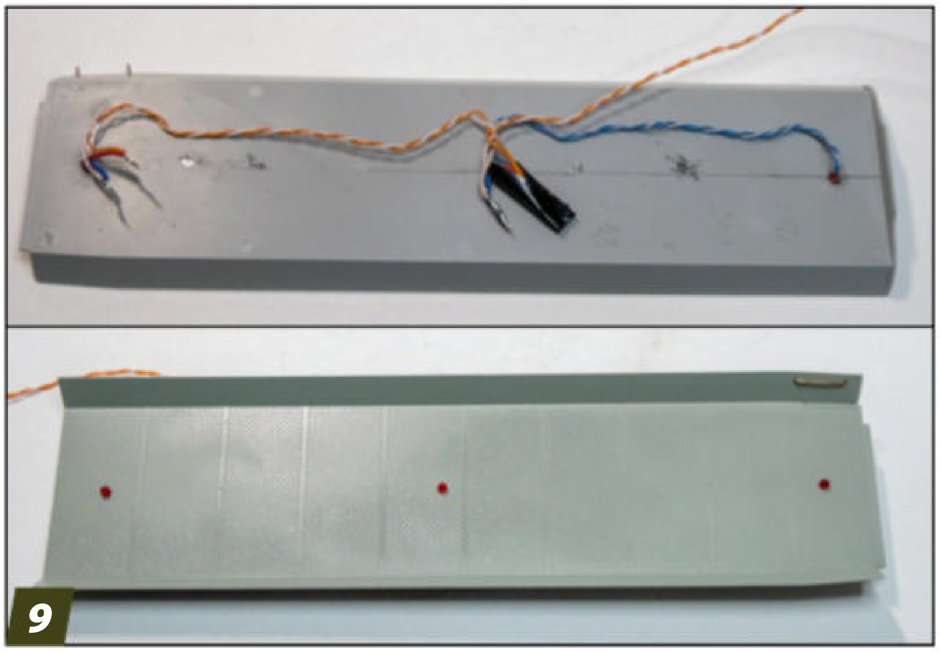
7

The tail section comes as separate parts that attach to the fuselage halves. I clamped each side and let them dry overnight to ensure they attached securely.



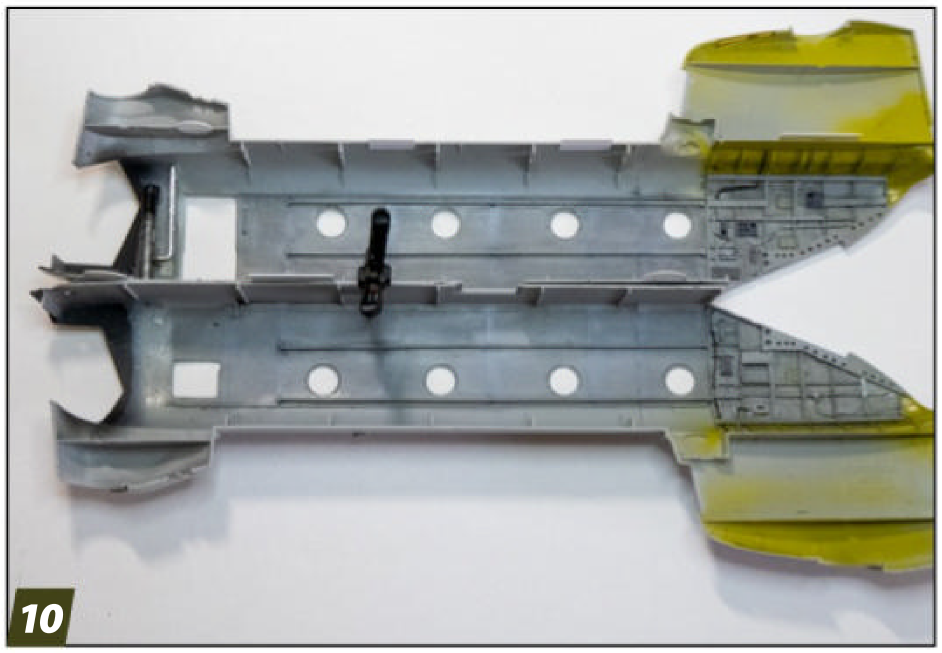
8

Referring to photos, I detailed the spartan areas alongside the ramp with styrene sheet and strip, copper wire, and solder. The result is not truly accurate — each machine seems to be a bit different — but the idea was to make the area look busy. Using styrene rod, I added seat rails inside the fuselage.



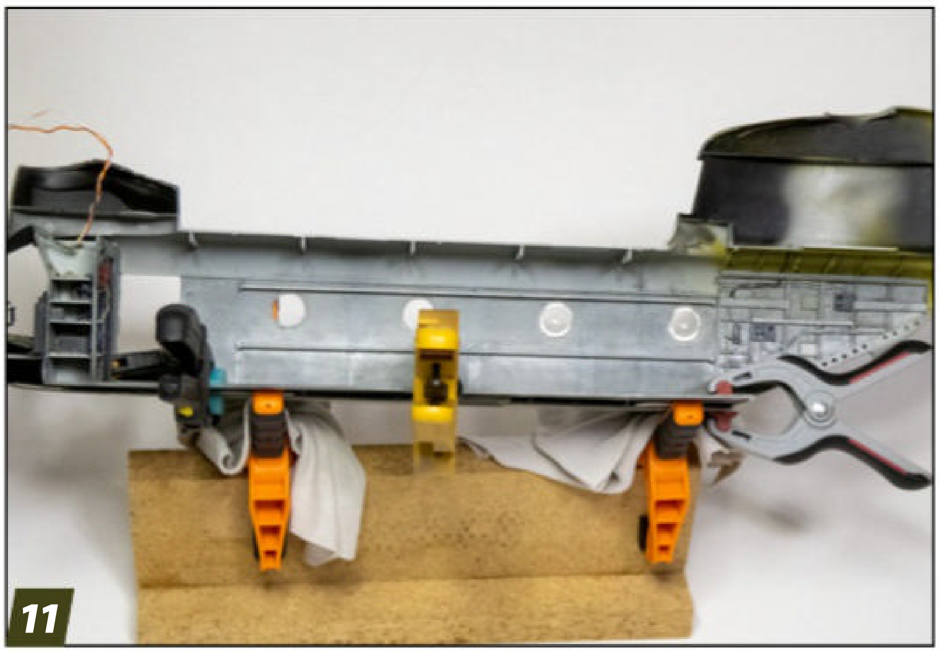
9

The cargo bay ceiling is a single part that I airbrushed with aircraft gray and sealed with clear before flowing on a wash of raw umber artist oil to pop the quilted insulation pattern. Three red LEDs will show off the bay.



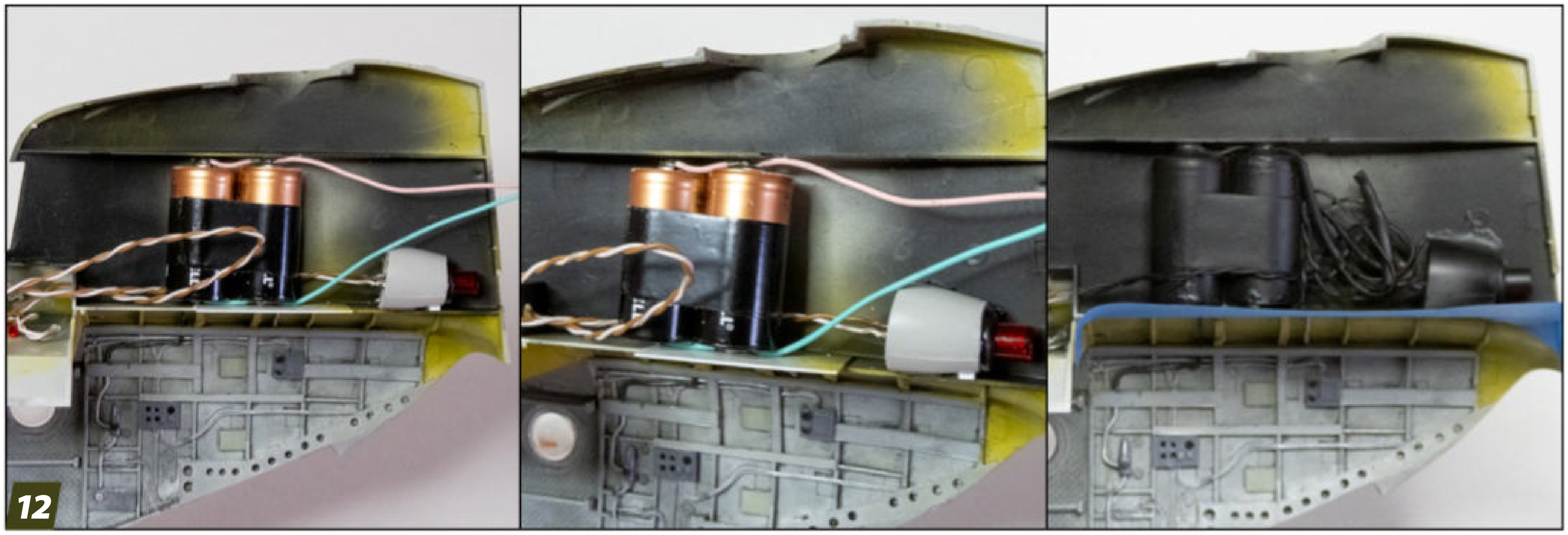
10

After priming the inside of the fuselage with black, I airbrushed the ramp area, cargo bay, and avionics section with aircraft gray. I left the area forward of the avionics bay black to match the rest of the cockpit. A burnt sienna wash emphasized details.



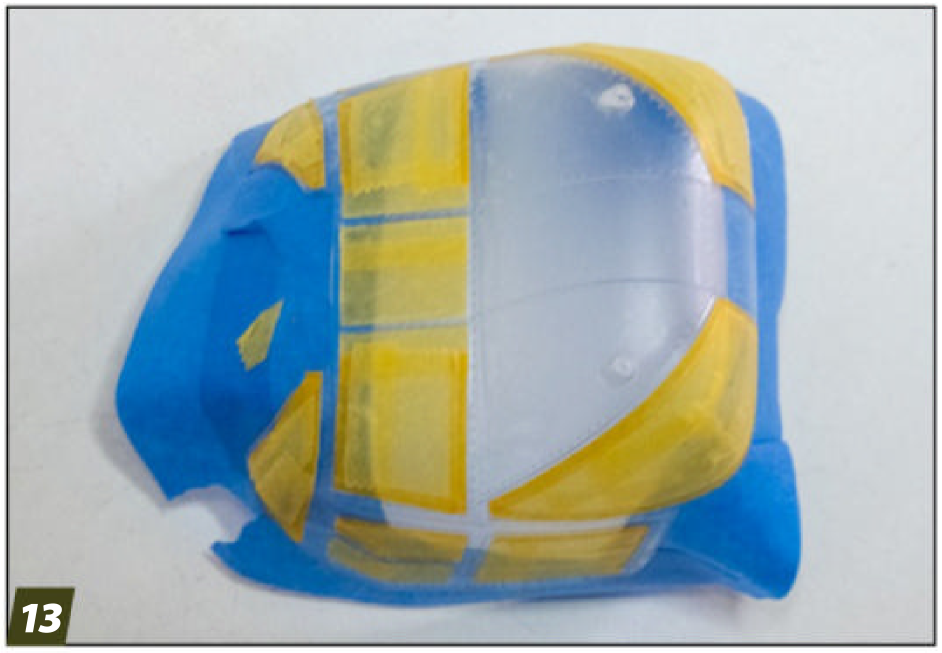
11

I glued the cabin windows into the fuselage halves and attached the cockpit/cargo bay floor to the starboard fuselage half. Clamps ensured a good glue bond and proper fit.



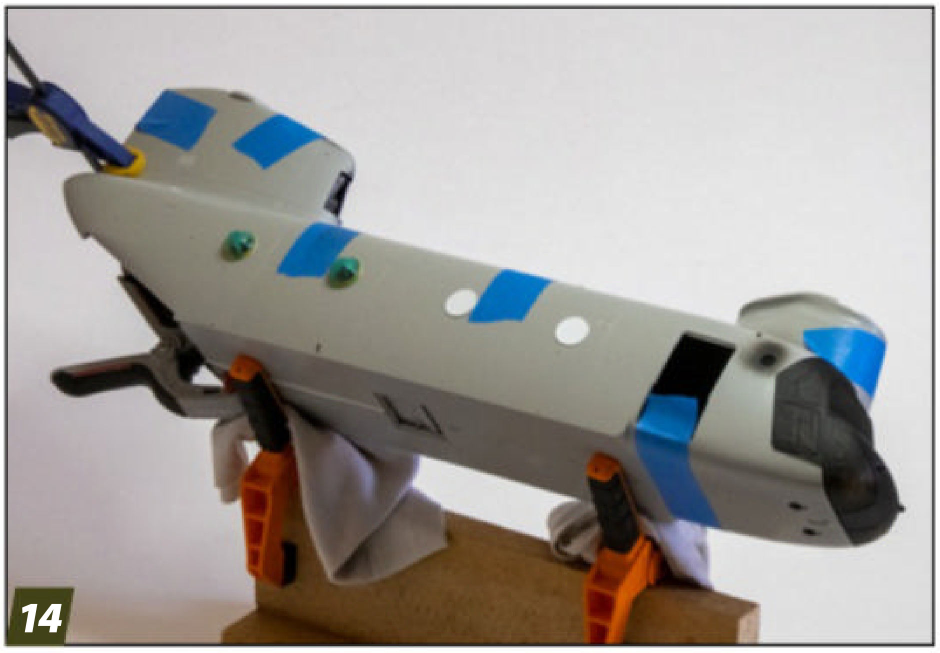
12

Before closing the fuselage, I routed the wiring for the LEDs was to the tail-rotor sail where I installed a switch and batteries. I could not figure out a way to make the power supply replaceable, so I used two lithium 3-volt batteries which should run the lights for a few years. I mounted the push-button switch in a cut-off drop tank from my spares box. The switch is operated by a straightened paper clip inserted through a small hole in a grille at the rear. After soldering the connections and testing the lights, I sprayed everything black to disguise it inside the grilles.



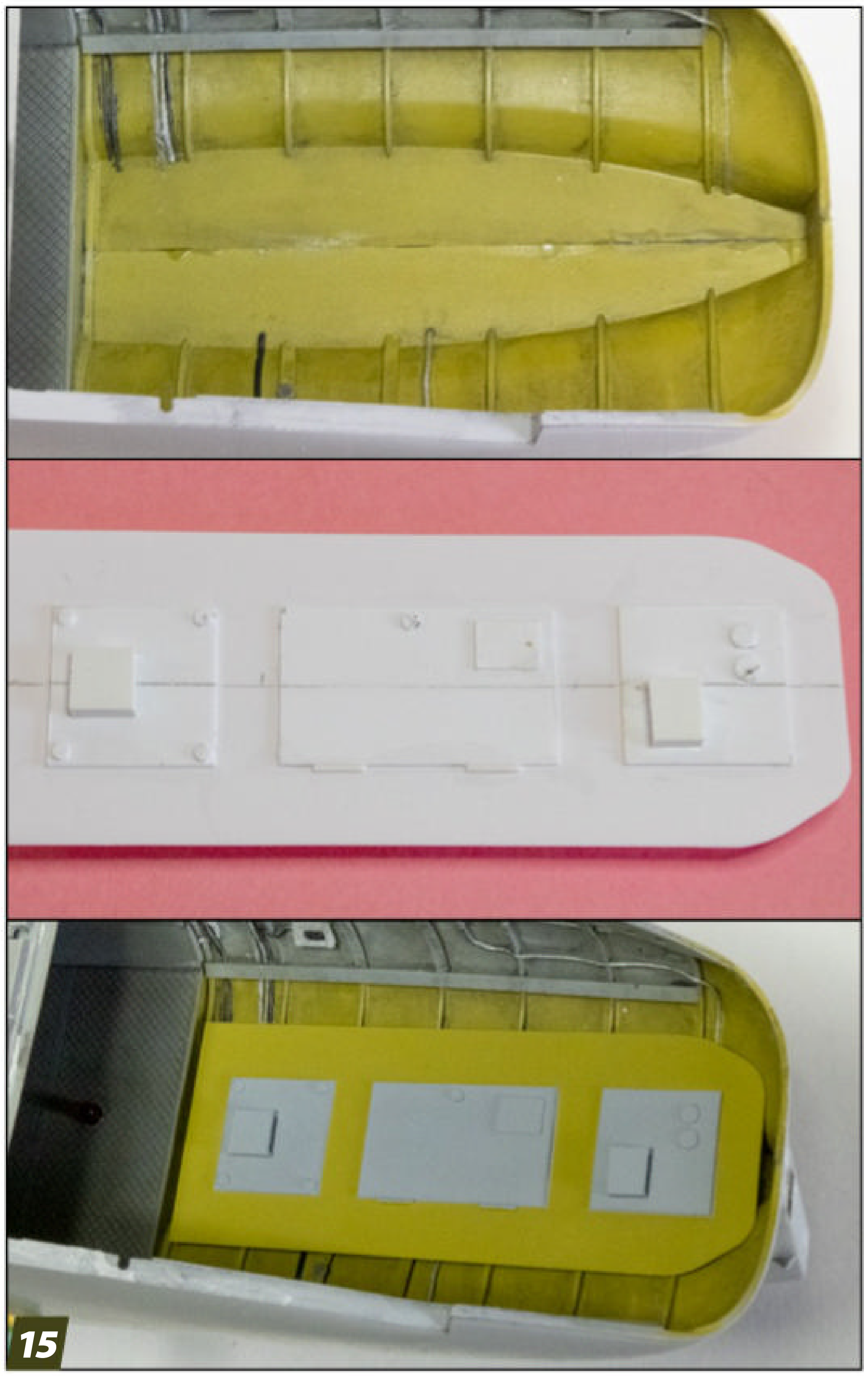
13

Before attaching the one-piece clear nose to the body, I masked the windshield and windows with Tamiya tape. Blue painter's tape protected the inside from overspray as I base-coated it with black to match the cockpit.



14

After a few tests to be sure everything lined up and fit just right, I glued the fuselage halves together. I added the overhead consoles before fitting the nose.

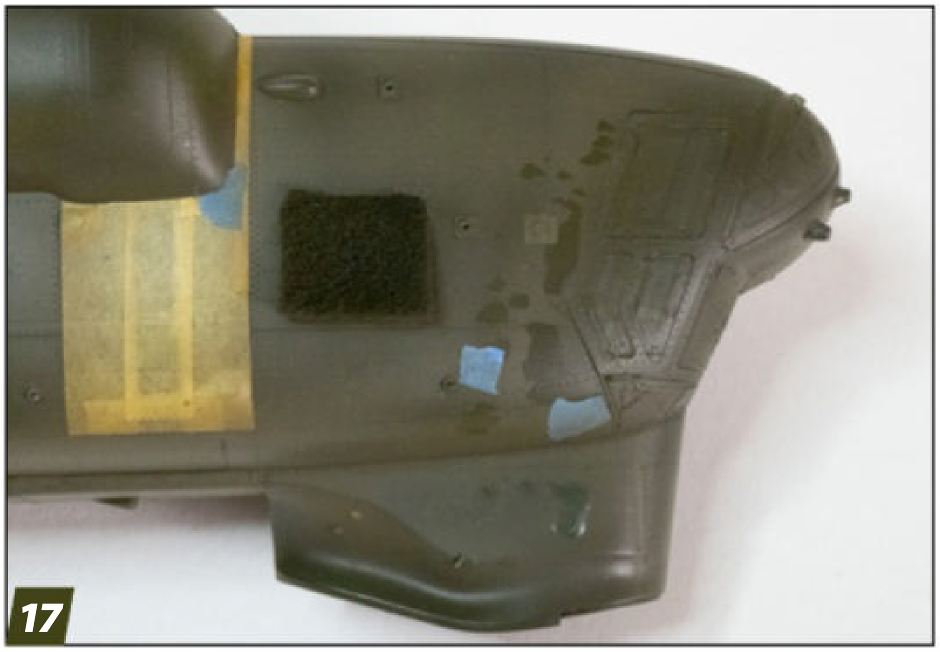


15

The ceiling over the ramp was, in a word, sparse. Looking at photos, I scratchbuilt a panel from styrene sheet, including details and access panels. I painted it zinc chromate yellow with gray details before gluing it in place.

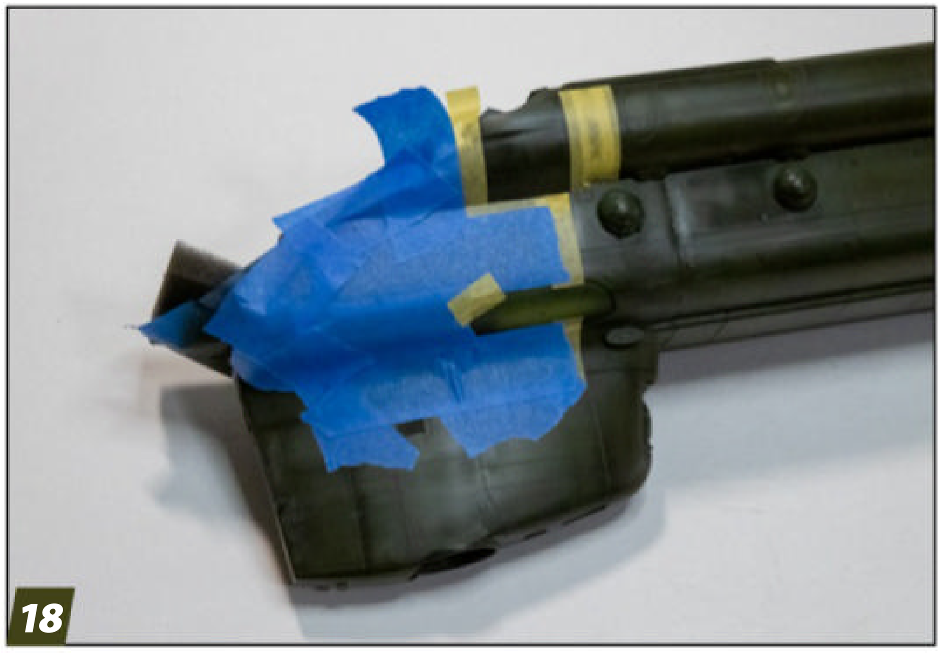
16

In preparation for painting, I studied photos of Australian Chinooks, and what struck me was how patchy the paint appeared. I wanted to replicate the effect and started with a layer of black primer.



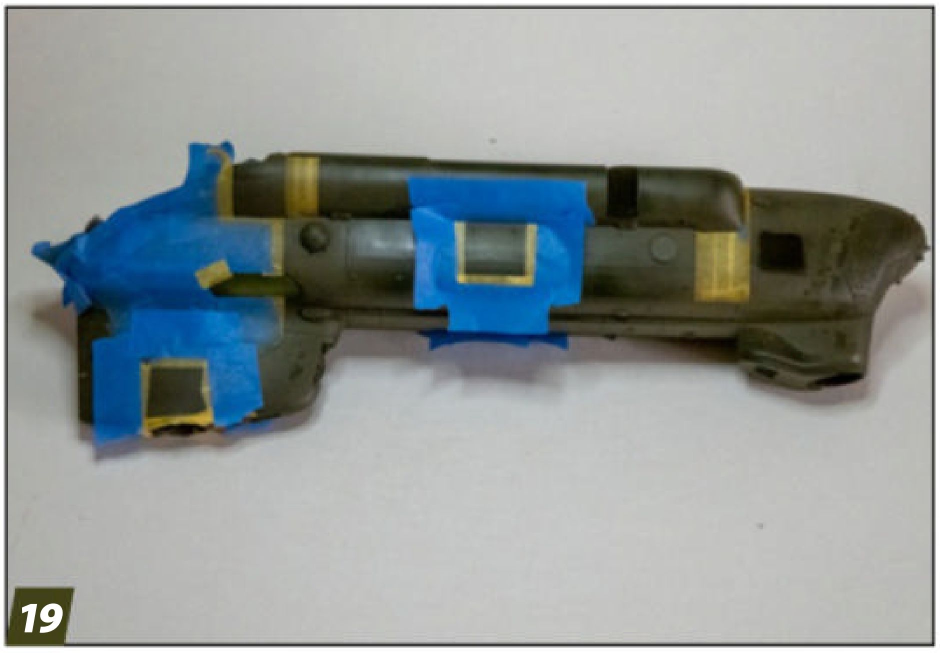
17

I airbrushed SMS US Helo Drab (No. PL176) along panel lines and on some airframe sections and then masked choice panels. For the obvious contrasting patches seen in the photos, I added torn bits of tape and masking fluid before spraying SMS US Olive Drab (No. PL167).



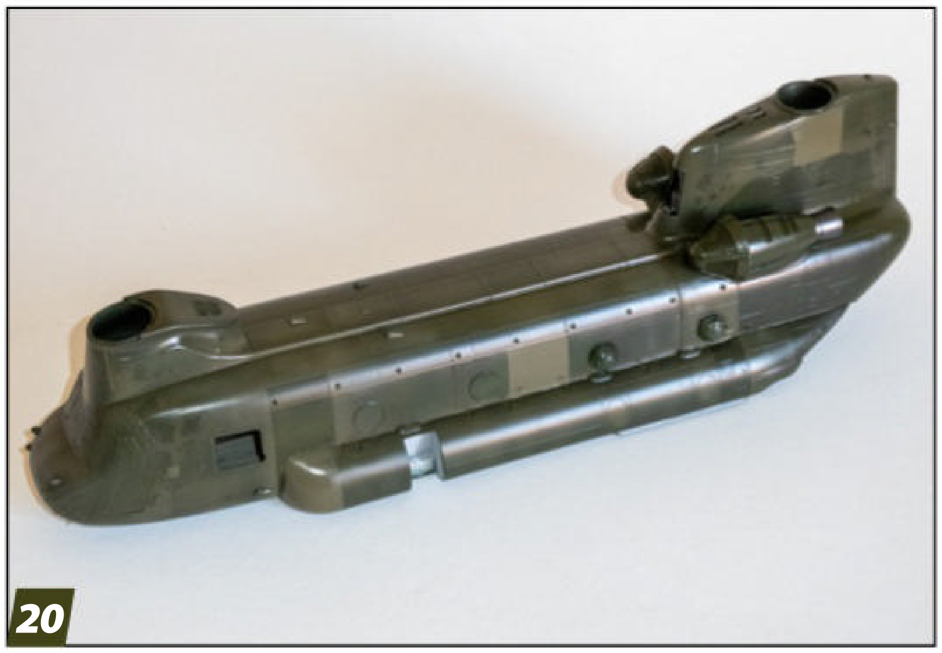
18

More masking followed as I sprayed various panels with SMS Camo Green (No. PL31) and Forest Green (No. PL77). I took a random approach to applying these variations hoping that when I removed the masks, I had the desired effect.



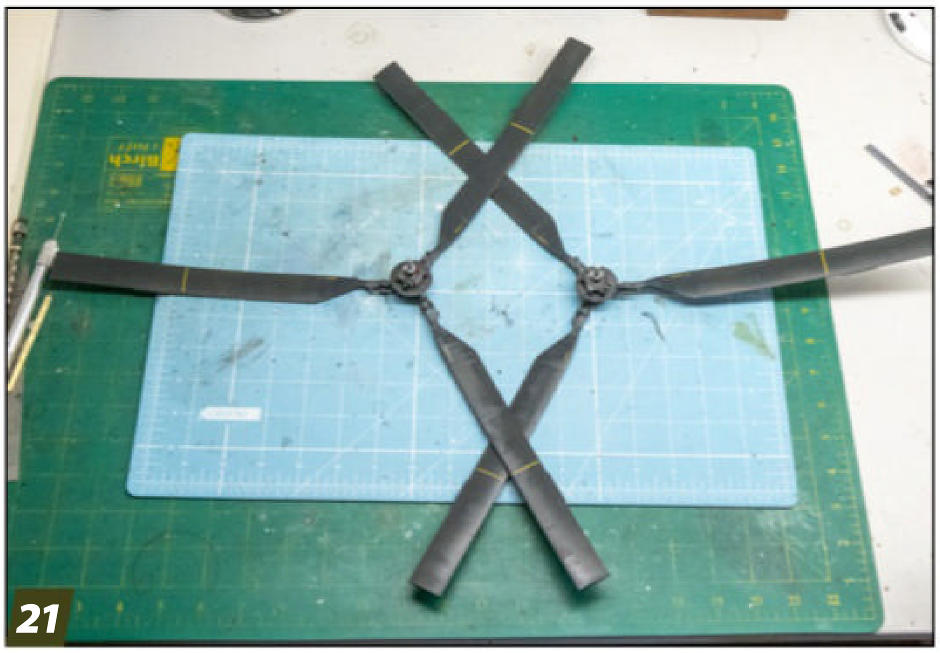
19

The areas where the Australian markings were applied, specifically the rear rotor sail and the center fuselage appear a lot lighter. I masked those panels and airbrushed them with Mr. Hobby Olive Drab (No. H304), which is considerably paler than the other olive drabs used so far.



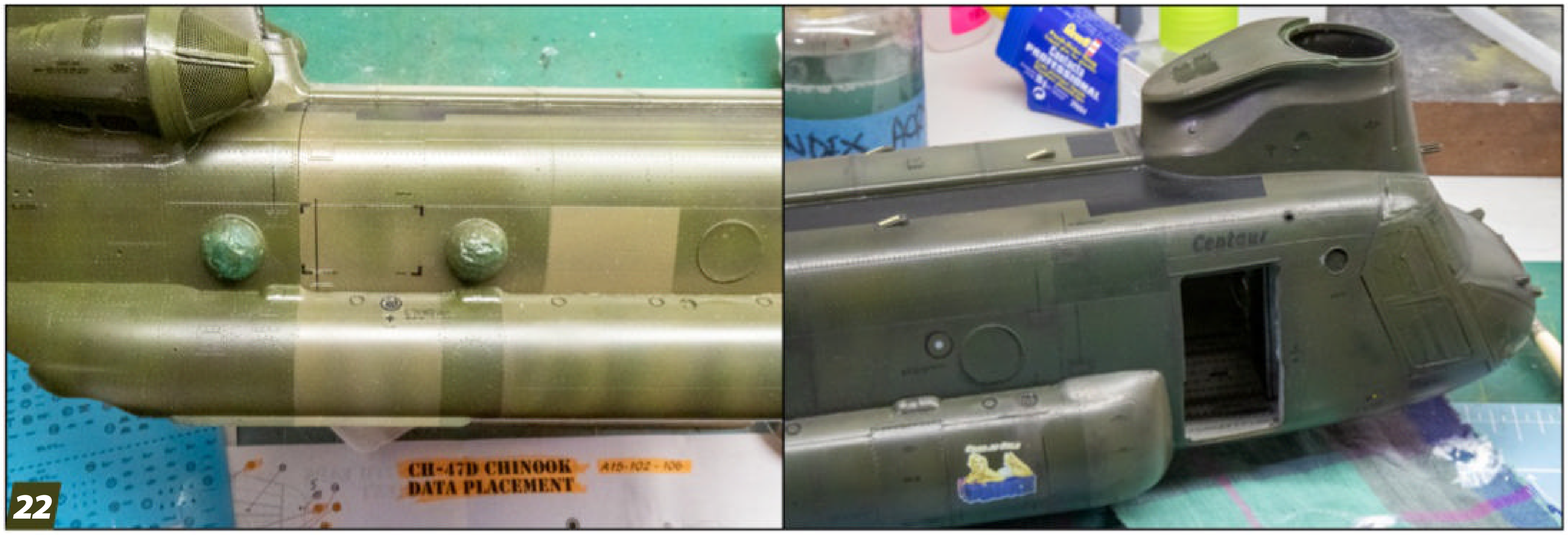
20

I continued until I was satisfied with the effect and then sealed the finish with Alclad II Aqua Clear Gloss (No. ALC600). The model looks too stark now, but weathering will tone down the contrast and blend the shades.



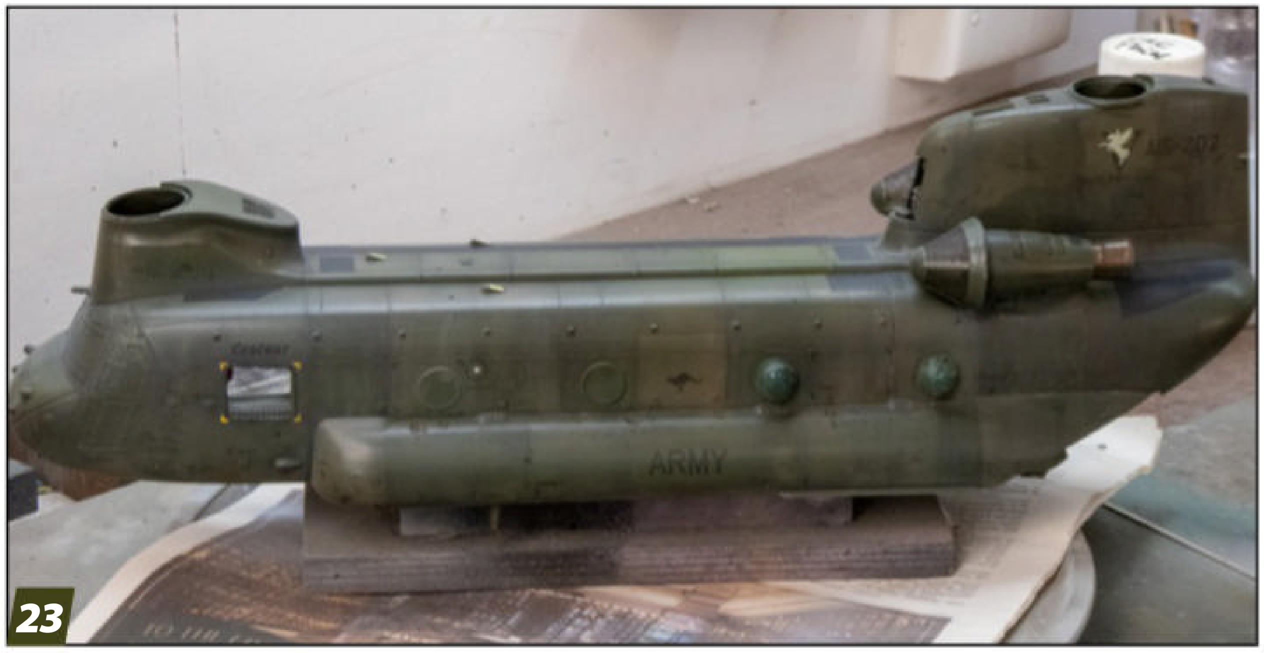
21

The enormous rotors assembled easily enough, but required all of my workbench. The rotors are contra-rotating, so pay attention. To ensure I installed them correctly, I marked the forward set under the spinner with red paint.



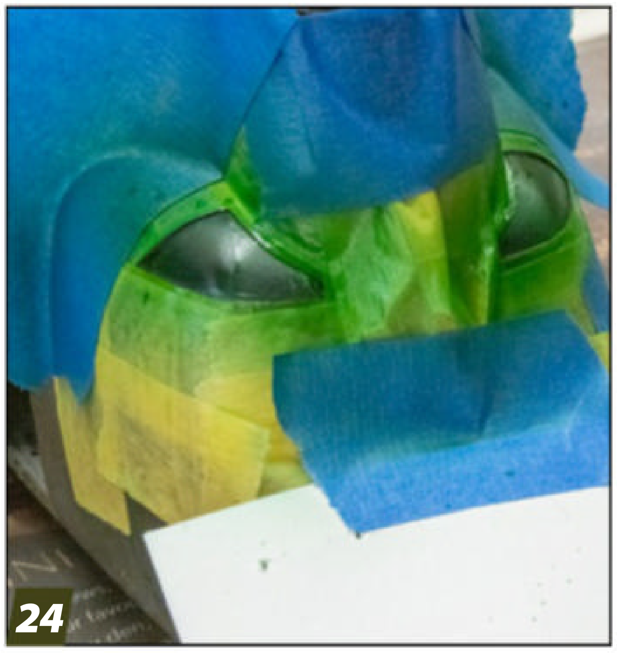
22

An Australian Chinook needs Australian markings. Ronin Decals has a 1/35 scale set that included A15-202. The set is comprehensive and includes stencils, national insignia, and individual aircraft markings, along with pin-up options seen on the CH-47Ds. It took several marathon sessions to apply all of the decals before I could seal the markings with clear gloss.



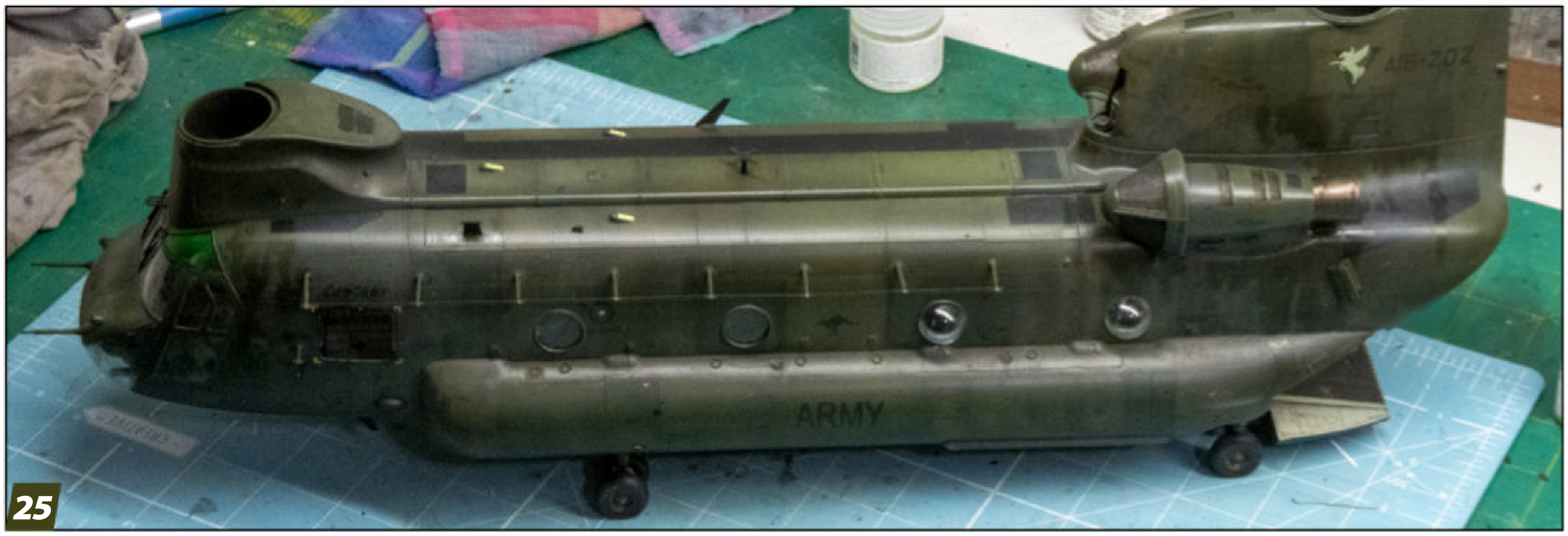
23

I flowed on lamp black and raw umber oil washes to emphasize panel lines. At that point, fearing the patchwork effect still looked too contrasty, I misted on a coat of extremely thin SMS Foliage Green (No. PL78). For weathering, I airbrushed thin Mr. Hobby Dark Earth (No. H72) and applied powdered earth-colored pastels around the lower sections.



24

After sealing the weathering with clear flat, I masked the upper cockpit windows and airbrushed them Tamiya Clear Green (No. X-25).



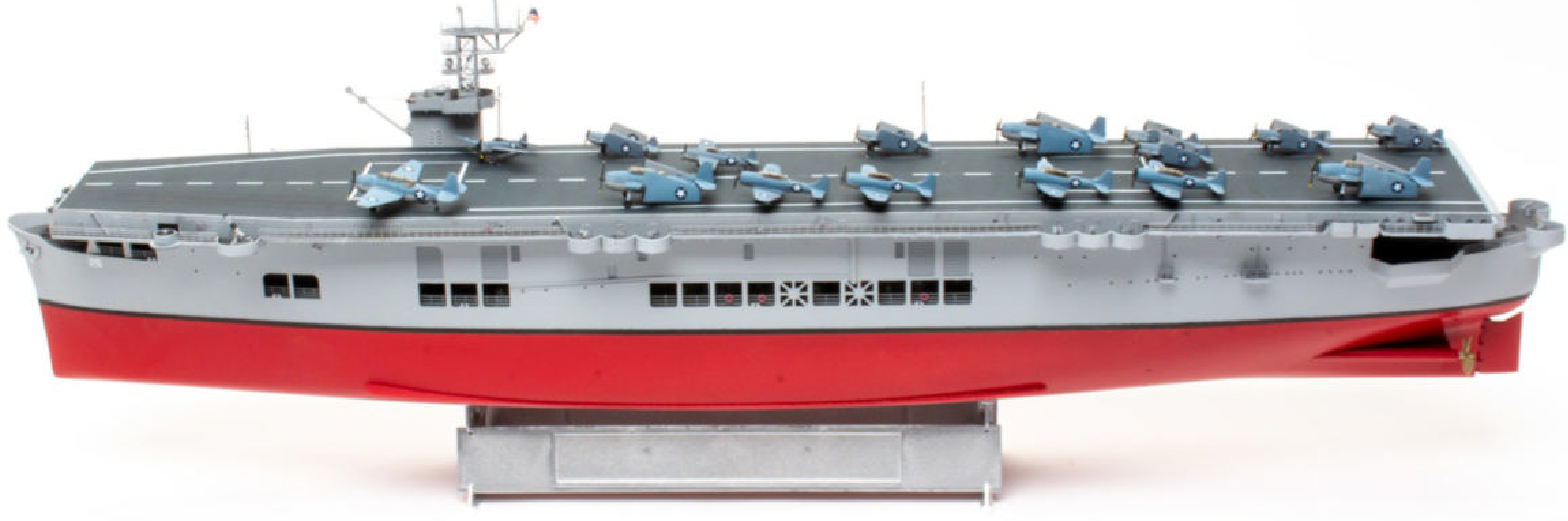
25

I added the landing gear and fitted them with a set of weighted resin wheels from Armory (No. ARAW35301). Next came small items like wipers and antennas. I equipped the supports along the port side with fine nylon thread superglued in place and colored black with a permanent marker.

A15-202
ARMY

FINAL THOUGHTS

WITH THAT, I called the big CH-47D done. Following through with my plans, I donated it to the SAS Historical Foundation, which intends to auction it to raise money for the preservation of SAS artifacts. At the time of writing, the model was on display at the SAS Regiment base at Campbell Barracks in Western Australia. **FSM**



Trumpeter USS *Sangamon* (ACV-26)

The USS *Sangamon* was unique in that it was in demand both as a *Cimarron*-class tanker and as a converted aircraft carrier. The first of four converted from a T2 tanker hull, the *Sangamon* and its sister ships proved resilient and capable in both roles during World War II. Faster, longer, and deeper-hulled than other conversions, it could carry a full 35-aircraft air wing with improved stability. Beyond its 24,000-mile range, it hauled an additional 14,000 tons of fuel for its escorts. Initially deployed in 1942 for Operation Torch in North Africa, the *Sangamon* also served in the Pacific and was the first to encounter the Kamikaze off Leyte, surviving significant battle damage.

Trumpeter's 1/350 scale kit comprises 252 plastic parts and 62 photo-etched metal (PE) details on a single fret. Sixteen aircraft from *Sangamon*'s 1942 deployment are included, as is an instruction booklet, decal sheet, and painting guide.

Throughout the assembly, follow the instruction sequence because it builds up and limits access to previous steps. A full-hull kit split along the keel and internal bracing helps to maintain the hull form. However, it did cause keel opening issues amidships while the bow and stern remained flush. Make sure to test-fit and shave down the light seams along the edges of the five internal braces.

The original tanker deck wears PE deckhouse details that are difficult to see with the hangar deck on top, and there are several railings and some deck machinery for refueling other ships.

After adding the hangar and flight deck, it's time to add the pre-measured catwalk railings and assemble the 17 20mm and two twin 40mm guns. In hindsight, I would have added the stern railings before installing the flight deck. Parts H4, H5, H6, and H7 are davits for the four ship's boats (not included).

Twenty-two styrene and PE parts create the island. The two radio masts (Part H1) extend below the catwalk and should not be trimmed off at the midpoint. The originals were able to raise to a higher elevation as needed and, though they look odd, hang as shown.

As ship modelers tend to build to a specific period, this kit has nearly all the elements for Operation Torch in 1942. The two radars and the gun tubs are pre-Pacific deployments, but the armament is a bit off-kilter in the stern, lacking the two 40mm and two 5-inch .51-caliber guns in the prominent tubs on either side of the stern. No flight deck numbers were used then, but they are included on the decal sheet. Flight deck line decals require just a quick dip in water to come loose.

The kit includes 16 aircraft: eight F4Fs, four TBFs, and four SBDs. These are mini kits on their own and offer either folded or open wings. The folded wings for the SBDs should be discarded because they were never built with that option. I did much of the painting by hand and set the decals before mounting the wings. The decals are almost perfect, but if you want to make them correct for Operation Torch, you will need to paint yellow around each fuselage star. No numbers are included on the decals, so you'll have to turn to the aftermarket or make them yourself.

Overall, this was an interesting, well-engineered subject with just a few minor historical flaws that can be rectified if you have the right parts in your spares box. The decals are a quick dip and release, although a bit thin, and lay down nicely. The PE railings were nearly the perfect length and had clear placement information. I did find that I spent as much time building the air wing as I did for the ship itself, but including the planes works well. Now, where to find 72 P-40s in 1/350 scale to do a sister ship?

– Mark Karolus

USS CVE-26 Sangamon
05369

Kit: No. 05369 **Scale:** 1/350
Mfr.: Trumpeter, www.trumpeter-china.com (Sample courtesy of MRC, www.modelrectifiercorp.com) **Price:** $162
Comments: Injection-molded plastic (gray); 314 parts (62 photo-etched metal); decals **Pros:** Scale-accurate
Cons: Missing two 5-inch/51-cal., two twin 40mm guns, and four ship's boats

Eduard F4F-3 Wildcat

Eduard's Wildcat is beautiful with clean, sharp detail: nearly microscopic raised and recessed rivets, precise panel lines, delicate engine bearers and landing gear legs, amazing prepainted photo-etched (PE) metal parts, and six decal options. There were three major production blocks for the F4F-3 and the -3A originally intended for Greece. Eduard has done an excellent job providing everything to model all of them, including different canopies, cowl rings, cowl flaps, engine assemblies, and tail wheels.

The "rivet counter" in me found a few nits to pick. The windscreen Eduard provides for planes equipped with the telescopic sight has an additional vertical brace. While some aircraft had it added later, they left the factory without that brace. The clear parts are slightly wavy, but a dip in Pledge Floor Gloss (PFG) cured this issue. The sprue gates attach to the edges of the wheel covers and hub, so it is difficult to keep them round during cleanup. Eduard included the demarcation for the propeller's yellow tips as a molded line that is best removed. None of these things take anything away from the kit.

My only real concern was the instructions, which seem to need more proofreading. The provided errata sheet primarily points out the different engine parts for the -3A variant (marking option B). In addition, there are errors in the decal callouts. For example, the stencils for the prop are No. 54, not 59. The 58-gallon drop tanks that all production F4F-3s could carry are never shown. As long as you pay attention to your references and use common sense, you should be fine.

Eduard suggests a mix of black and interior green for the cockpit, a mixture that matches Mr. Color Bronze Green (No. C519), so that is what I used. There are three options for the instrument panel: a flat plastic part to receive decal instruments, a panel with raised instruments, and a part with platforms to receive layered PE panels. I chose to paint the raised detail on the plastic consoles because it had a better dimensional effect than the PE or decals.

Excellent describes the kit's fit and engineering. The engine bearers are thin enough to flex into place, but they will break if pushed too hard. The tabs on the horizontal stabilizers were so tight that they induced dihedral. After removing some material, I used a piece of tape stretched from tip to tip across the underside of the fuselage to hold them perpendicular to the vertical stabilizer while the glue cured. A spot of Vallejo putty under the starboard stabilizer was the only filler used on the entire kit. The rudder and elevators simply snapped into place. I left the engine, cowl, and landing gear off for painting.

I chose marking option B, a Marine Wildcat on maneuvers in November 1941. The decals are extremely thin and react well to Microscale Micro Set and Micro Sol. But be careful, they may fold over on themselves, and they cannot be rescued. I had to steal the portside cross from a spare kit; it is the only decal slightly out of register.

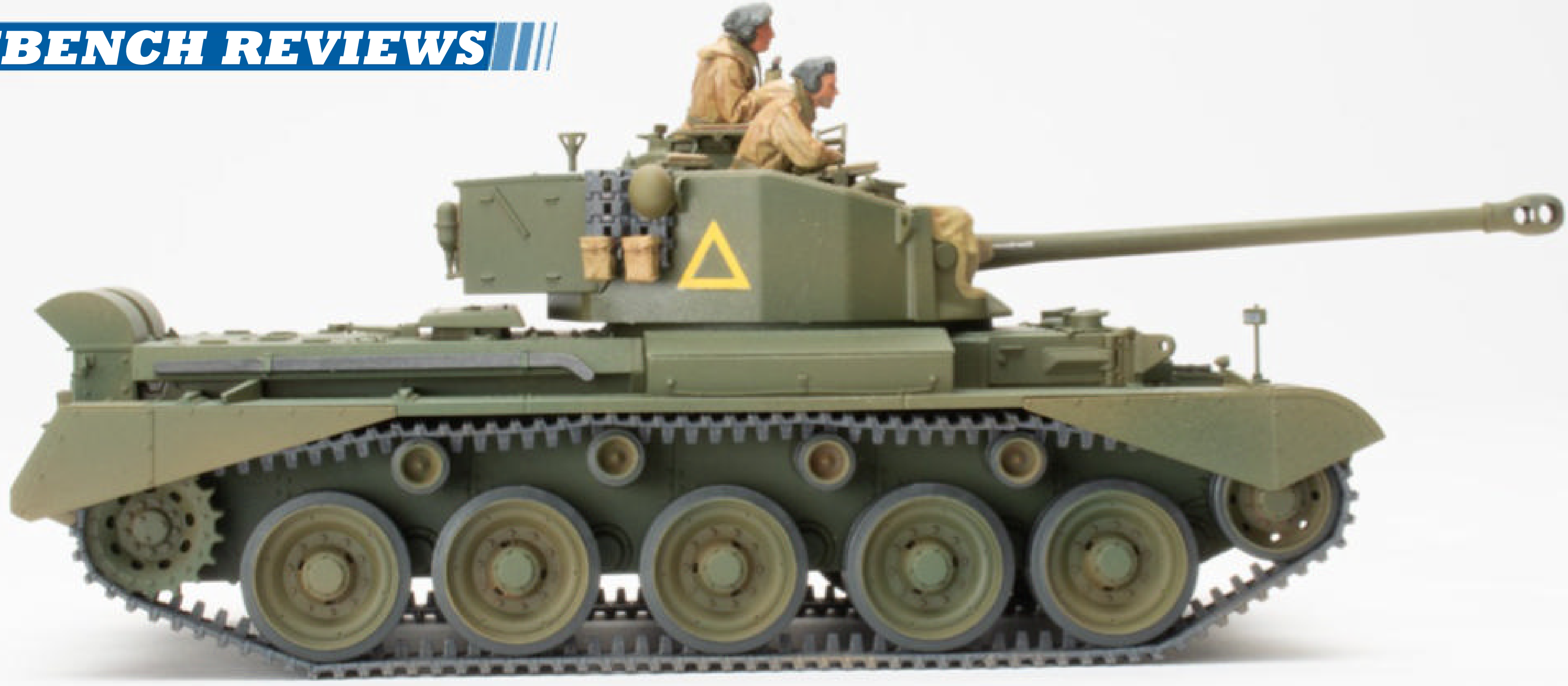
There was some play when I added the engine, so make sure to get it aligned. I had no difficulty installing the landing gear after painting. Be careful when attaching the gun barrels because there is nothing to stop them from sliding into the wing. Thankfully, six are provided and you only need four for the F4F-3.

Eduard's Wildcat was well worth the wait. The interior detail is superior; the cockpit, landing gear, and engine are spectacular. The exterior elements, especially the raised rivets, must be seen to be believed. To my eye, the overall shape is good, although the wing scales out wide in span. Eduard has given us another winner, and I've already seen the F4F-4 version. I can't imagine how long the line would be for a new Eduard Corsair!

– Andy Keyes

F4F-3 Wildcat

Kit: No. 82201 **Scale:** 1/48
Mfr.: Eduard, www.eduard.com
(Sample courtesy of mfr.) **Price:** $54.95
Comments: Injection-molded plastic (gray, clear); 215 parts (60 photo-etched metal); decals; masks
Pros: Phenomenal fit; excellent details; wide choice of markings **Cons:** Delicate engine bearers and landing gear legs



Tamiya A34 Comet

The British A34 Comet, with a speed of 29 mph and a 77mm high-velocity gun, became a great asset for British and the Allies in the closing months of World War II in Europe.

Molded in olive drab plastic, the parts show well molded panel lines and rivets and there is the perfect number of link-and-length tracks for each run.

Fit is excellent throughout, speeding assembly. The lower hull comprises several panels including inner and outer sides that sandwich the Christie suspension.

I left the posable driver's and machine gunner's hatch closed to hide the lack of an interior.

Pay attention when adding the return rollers, because one pair on each side has a tab to align the tracks — don't inadvertently cut them off.

Diverging from the instructions, I left wheels loose and assembled each complete track run off the model. Then I attached the wheels to the tracks and fitted the complete assemblies to each side of the hull. It took a bit of effort, but it worked perfectly and made painting easier. Of course, it the runs can also be assembled according to the instructions, too.

The small parts are finely molded and fragile, so be careful. I broke one part of the tow cable (Part D12) while gluing to the other section. Optional Normandy cowlings are provided for the rear engine screen — which one to use for the marking options is clearly indicated — or you can leave them off.

Like the rest of the kit, the turret with its mostly one-part gun went together without problems. Remember to paint the interior of the hatches if you plan to use the two crew figures. When putting the tankers together, ensure their arms are positioned just right with the hatches. They have excellent features, but you will need a good magnifying glass to paint them.

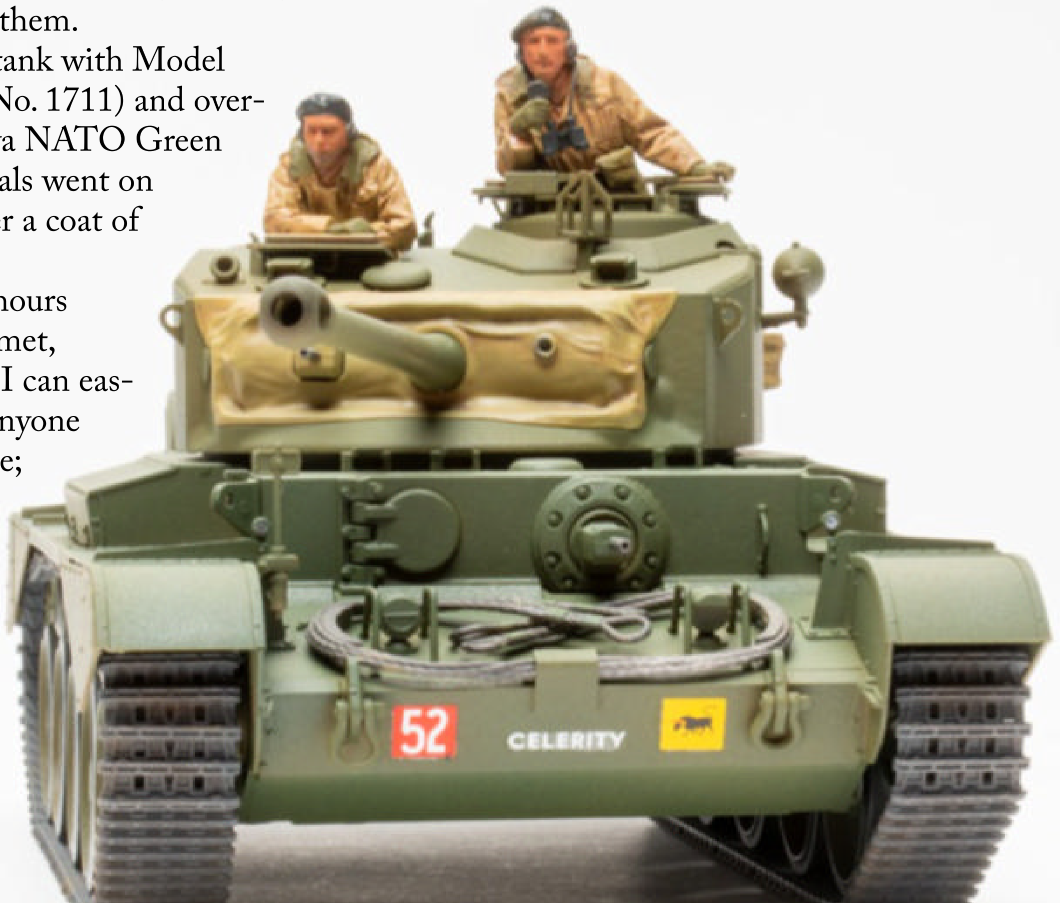
I base-coated the tank with Model Master Olive Drab (No. 1711) and oversprayed it with Tamiya NATO Green (No. XF-67). The decals went on without problems over a coat of clear gloss.

It spent about 40 hours building Tamiya's Comet, including the figures. I can easily recommend it to anyone with a little experience; the kit is a winner, and you won't be disappointed.

– Ted Horn

A34 COMET
BRITISH CRUISER TANK
TAMIYA
A34 COMET
1:35

Kit: No. 35380 **Scale:** 1/35 **Mfr.:** Tamiya, tamiya.com (Sample courtesy of Tamiya America, tamiyausa.com) **Price:** $55 **Comments:** Injection-molded plastic (olive drab), 298 parts (2 vinyl), decals **Pros:** Excellent fits; clear instructions for installing tracks **Cons:** Some fragile parts require care



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CA, VENTURA: MODELFEST '23. Sunday, February 26, 2023. 8:30am-3:00pm. Plastic model contest and swap meet to be held at the Seaside Park / Ventura County Fair Grounds. 10 W. Harbor Blvd., Ventura, CA 93001. Admission: $10 per person. State parking fee applies. For more information contact Vernon Morseman at 805-658-8138

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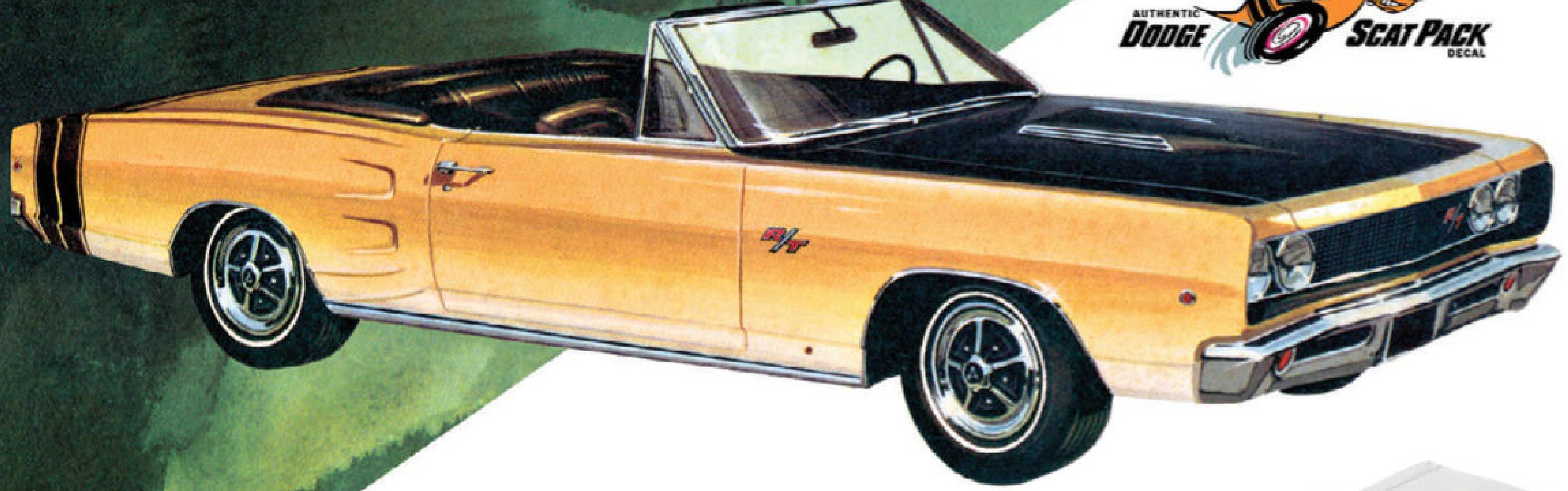

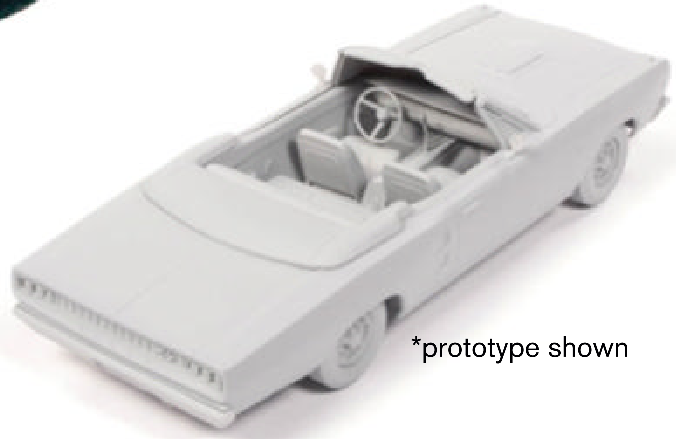

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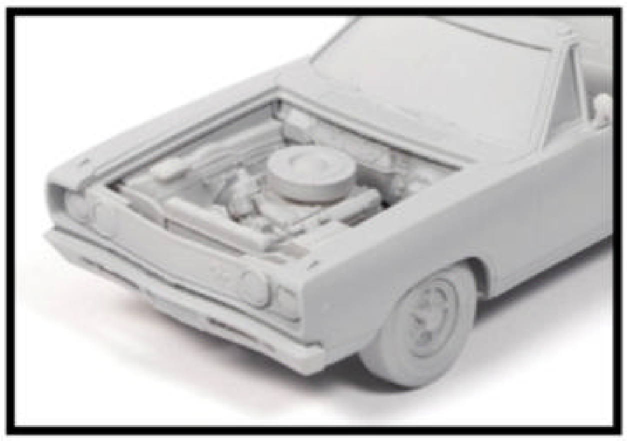

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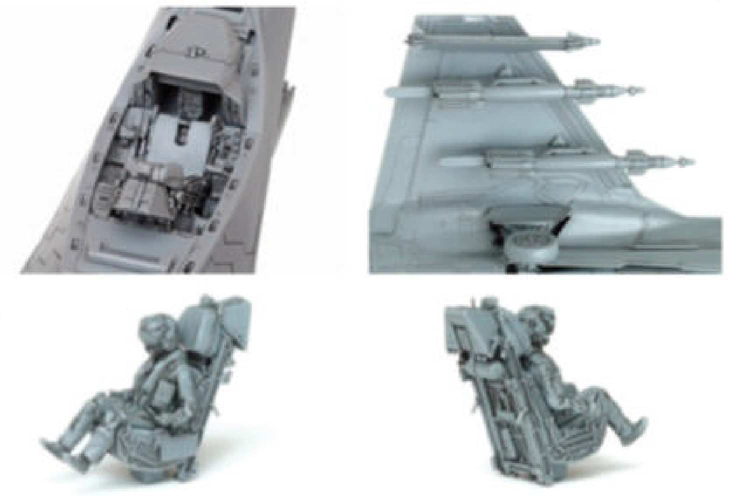

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